

KEY TO PROBLEMS
IN
PRINCIPLES OF ECONOMICS
(EIGHTH EDITION)

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PREFACE

Since it is probable that some persons will look on the supplying of a key to the problems of my text as quite unnecessary, not to say impertinent, I here note the considerations which seem to me decisive in favor of the policy adopted. First, it is always possible that the same problem should quite legitimately be interpreted and answered in more than one way. But, secondly, it is very important that each problem should be interpreted in just one way, that is, *the way fitted to bring out the point which it was designed to illustrate*. Again, it is very important that, throughout any particular class, the method of interpreting and answering a given problem should be *uniform*, a condition which, in case several different persons are teaching different sections of that class, will not be realized as a matter of course. Finally, the best device for insuring the presence of these two conditions, namely, an *appropriate* interpretation and answer and a *uniform* interpretation and answer, seems to be the well-tried one of a key prepared by the author himself.

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Ann Arbor, Michigan
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KEY TO PROBLEMS

PRINCIPLES OF ECONOMICS

Pages 4-5

Problem 1

The first statement means that lumber as such, lumber as a kind of thing, is more important to us than oxide of lead. This is plainly true, because the lumber is essential to having the house at all, while the paint is necessary merely to having the house in an especially desirable state.

The second statement means that a given quantity by weight of lumber can be spared with less disadvantage than an equal quantity of oxide of lead. We should experience less inconvenience if we lost the former than if we lost the latter. The reason is that a hundred pounds of lumber are much easier to get (to produce) than an equal quantity of oxide of lead.

Problem 2

Effective importance is importance which really counts, in the sense that it calls on us to regulate our conduct with reference to it. It may do this for any one of several reasons. Thus, in some cases our action is necessary to *produce* the good in question, using "produce" in the ordinary sense. Again, in case we cannot produce the good and hence are not called on to do so, we need to *take care of* it after it has come into our possession, economize in its use, etc. No such condition of effective importance can be present in the case of rain or sunshine for the simple reason that these goods are *completely independent of our wills*. Though we have ample motive for making sacrifices in order to have these goods or get rid of them, such action is not feasible. These goods, therefore, cannot be conduct-determining, hence cannot have effective importance.

Problem 3

This is very common stuff, but very silly. The way in which we look at things on the "verge of oblivion" no more gives their true, their real, proportions, than does the way we look at them at any other time. The real, true, comparative significance of things is determined by the totality of conditions which actually prevails. Under the conditions named in the quotation, the important things were undoubtedly food and water. Under those conditions, these were of infinitely greater im-

portance than anything else. But, in the midst of a normal community where food and water are abundant, these are not the most important things. Relative importances have been fundamentally changed.

Pages 7-8

Problem 1

Unless a thing has utility, capacity to satisfy some want of ours, we should not be willing to give something else which we desired in exchange for that thing. That is, it would not fulfil the condition just laid down as necessary under the present order: it would not possess exchange value.

It may well be added that such a thing would not fulfil the general conditions earlier brought out. That is, it would not have even generic importance. Unless things have the capacity to satisfy our wants, they manifestly have no importance at all for us. Remember, however, that, though a thing must have utility if it is to be an economic good, still having utility will not necessarily make that thing an economic good. It must have effective utility, effective importance.

Problem 2

A thing in order to be wealth must be appropriable; for, unless a man could take exclusive possession of a thing, he would be unable to oblige us to give him something in exchange for it. Again, a thing to be wealth must be transferable: since, unless the person now in possession of a thing could relinquish possession of it and give us possession of it, we should not be willing to give him anything for it, and so it would not have value.

Problem 3

Such water is not ordinarily wealth. It *could* be appropriated, but has not been. Hence persons desiring to get it are not obliged to relinquish some desirable object in exchange for it.

Problem 4

An amiable disposition is not wealth: for it obviously could not be transferred. The gold on the surface of the moon is not wealth, to us anyhow; for it could neither be appropriated by any one of us nor transferred from one of us to another. A vein of coal not known to be in existence would not be wealth: since, of course, no one would be willing to give anything for it unless he knew about its existence.

Problem 5

The result of the labor expended in pasting circus posters on the houses of Washtenaw avenue would not be wealth. The point to be

made is that *the mere expenditure of labor does not bring wealth into existence*. The results of that labor must be desirable, and also must possess value.

Problem 6

The error in the quotation is in supposing that the stone lacks utility—is not useful. To the economist utility means, not necessarily capacity to satisfy certain fundamental, necessary wants, but capacity to satisfy *any wants whatever*. Now, the stone in question surely possesses this capacity:—the collector has some desire which the possession of this stone gratifies, or he would not give anything for it.

Problem 7

No, this does not imply that the possessions of the poor man are not wealth. Anything is wealth which has value. And whatever goods of this sort the poor man possesses, however few, constitute wealth.

Pages 21-22

Problem 1

Examples of autonomous production are furnished by the woman preparing her own food, making her own garments; the man blacking his shoes, shaving himself, and so on.

Problem 2

The point of these sentences is that Crusoe's economic life was autonomous. He did not cooperate with other men in respect to economic matters. There was no specialization involved.

Problem 3

This means that the remuneration in the former employment falls off while at the same time in the latter it rises, and consequently self-interest leads people to leave the former occupation to go into the latter, or anyhow leads the younger generation who are choosing their occupations to choose the latter rather than the former. Illustrations of this are common in everyday life. When a new occupation arises, as telegraphy did fifty or sixty years ago, a great many young men go into it for the exceptionally high wages that are paid. But very soon this intensity of competition brings down the price of the service involved to figures as low as, or lower than, those in similar occupations; and, in consequence, the movement is checked or even reversed.

Problem 4

The great advantage of foreign trade, as already pointed out, is that it brings about *cooperation* between us and other people, and hence insures greater productivity, and so more products and better products

for all. The sort of thing said in the quotation is misleading, because it implies that surpluses come into existence of their own accord instead of being the result of the deliberate choice of a special vocation. Doubtless there are cases where surpluses appear by accident; and, in those cases, it is of real advantage that we have a foreign trade where we can dispose of such surpluses and get in exchange something which is more wanted. But this is surely a minor advantage of foreign trade.

Problem 5

Under the circumstances indicated a communistic society would by the direct exercise of its authority cut down everybody's consumption of potatoes for the current season. Under the present order, the price of potatoes automatically rises from thirty or forty cents to eighty or ninety cents; and, in consequence, there is automatically brought about a general curtailment of consumption at this point.

Problem 6

This is so obviously untrue that one finds difficulty in understanding how anyone could believe it, yet a great many people do believe it, or, anyhow, profess to. Plainly, it will pay us to buy a thing from others even if we can produce it ourselves, provided we can get it more cheaply by producing something else and using that something else to buy the first thing. Perhaps the best way to make the student see this is to illustrate it with some commodity which we could produce *but only under great disadvantages*, e. g., bananas, oranges, etc., in Michigan. Of course we could produce these, but only under glass; and the most hide-bound protectionist would admit that the operation would not pay the nation at large.

Problem 7

Prices control, regulate, our economic action. That, in general, prices which are *freely determined* do this regulating of our economic action better than would prices which are consciously fixed by authority—this proposition is assumed in our maintenance of the present order. It follows that every time we fix prices by authority we run the risk of setting up a regulator which will do a poor job, will *regulate our action unwisely*. As far as possible, then, we should leave prices to be determined without interference. "Do not meddle with the thermostat." If, now, we are dissatisfied with the results reached in a particular case, we are less likely to cause the evil consequences which we fear if we make use of *corrective* processes rather than *prophylactic* ones, that is, processes which interfere at the outset, which consciously change

the price to which is committed the regulation of economic action. The principal reason for this, perhaps, is the fact that the undoing of anything that has been done, the neutralizing of tendencies already set up, is naturally a less complete process than would be hindering those tendencies from being set up at all. It follows that, by using the corrective method, we are more likely to limit the effects of our interference to those particular consequences of the original price which we really desire to shut out.

The above reasoning is well illustrated in those cases where prices seem unbearably high from the standpoint of the public welfare. The direct method of meeting this case, and the one most commonly favored by the thoughtless, is to fix a *maximum* price. Now, even if we admit that some cases can best be provided for in this way, this is in general seriously objectionable for the reason that it tends to produce a *scarcity* which is bound to increase very greatly the underlying difficulty against which we are fighting. For holding down a price by a legal maximum cannot help taking away one most powerful stimulus to the increase of production and is even very likely to cause the diminution of such production. If now, instead of resorting to the maximum price policy, the government chooses the alternative of corrective action, such tendency to check or diminish production will be eliminated or reduced to very small dimensions. Thus, the government may buy up supplies with public funds and resell to the classes specially injured by the high price at a much lower price. In doing so, it obviously will bring the needed relief; while, on the other hand, it will not in any considerable degree tend to cut down production. Doubtless the burden of providing public funds to make up the deficit resulting from the policy outlined will fall in some measure on the producers immediately interested, and so far will discourage production in this field. But, since the necessary taxes will have to be levied in accord with some general rule affecting large classes of persons rather than just the individuals engaged in the one business, the actual burden borne by these persons will be but a very small part of the total and therefore will constitute but a small proportion of their profits. The tendency, therefore, of the new policy to discourage production in the particular field concerned would probably prove almost negligible.

Problem 8

A first undesirable consequence of such a working of things is to produce a strong tendency for labor to go into the particular industry involved in preference to others, and so a tendency to make the supply

in that field excessive and that in other fields scanty. Doubtless, in the case of industries which are freely competitive, this tendency cannot permanently cause a great dislocation of the labor power of the community, since the excessive supply of labor tending to appear in this field will in the long run be unable to find employment and hence will be obliged to turn to other fields. But this corrective process will take a long time and will involve many inconveniences and considerable suffering.

Again, the increased cost due to the excessive rate of wages supposed will inevitably lead to a higher charge for the commodity or service produced, which in turn means increased cost and so higher prices for other products dependent on this particular industry. Thus, if because of increased wages cost the price of transportation service goes up, the price of meat, coal, iron, etc. will almost necessarily go up. That is, we cannot attain a particular desired end by such arbitrary interference without entailing remoter consequences to which we should very strongly object.

Again, if, as in the case of railway transportation, the industry involved is under public control so that the fixing of the price of service produced requires the consent of legislatures or courts or commissions, the proper readjustment may be delayed a long time, and in consequence the efficiency of the industry may become greatly impaired.

At best the spectacle of excessive pay in the one particular field is likely to cause discontent in other fields and so a demand for interference in these other fields until all regulation of economic action becomes a public, arbitrary process, certain to fail of reaching satisfactory results.

Pages 29-30

Problem 1

Surely not. Orange growers are obviously *like* units. The present order assumes that such like units *compete* against each other. This of course excludes their acting concertedly in the sale of their products.

The case is the same with the grain raisers when buying supplies. They are *like* units—this time on the buying side. As such, they ought to compete rather than combine.

Problem 2

Obviously not. Sympathy with the classes which have to be satisfied with small incomes and demagogic fear of the mass vote make people act and talk quite inconsistently in respect to this matter; but, from the

theoretic point of view, the case is no different from that of the oil trust.

Collective bargaining of *all* the roads with *all* the men would be quite inconsistent with the principles of the present order. *Prima facie*, it would be fairer than the former plan, since the unfair combining of the laborers would be more or less offset by the equally unfair combining of the employers.

Problem 3

The comments above quoted overlook the natural consequences of free competition. That condition being assumed, we can depend on the self-interest of the producer to eliminate restrictions on output; for, however reasonable restrictions may seem, *abstractly considered*, each producer will be disposed to believe that his particular interests will best be served by the opposite policy. This conclusion he will reach whether he expects other producers to practice the restrictive policy or the reverse. If they *do* practice that policy, he would profit from *not* limiting his output, since he would on that plan get both the benefit of the high price caused by the restrictive policy of others and the benefit of the largeness of his own output. If others did *not* pursue the restrictive policy, he would profit by following their example, since he could not hope by himself to produce any material limitation of the total output and so could not hope to raise price in any material degree, while, by making his output as large as possible, he would in some degree offset the inevitable lowering of price. Restricting output in order to raise price is practicable only when there is a monopoly or anyhow an almost complete combination of competitors, that is, when competition is not free—a condition which the present order assumes to be unfulfilled, and one which certainly is unfulfilled throughout much of production, particularly in the industry of farming to which the remarks quoted were applied. It may be added that, if the reasoning involved in the quotation were sound, we should long ago have had the condition of things predicted; for the fact that cutting down the total output will raise price is a discovery which was made as soon as we got out of the Garden of Eden.

Problem 4

So long as competition remained free, the presence of exceptional profits in the middleman's field would lead to the transfer of capital and enterprise from other fields of production to this one, a process which of course would go on till profit difference had been eliminated.

Problem 1

(a) If you sell directly to customers, you will be obliged to make a great many sales instead of a few as in the case of selling to dealers. This will mean spending a lot of time as well as performing a lot of work going from house to house finding customers and delivering the goods. Again, you will have considerable trouble measuring out the goods, making change, carrying the goods to the place of storage, etc.

(b) Selling fruit directly to customers in places to be reached only through the parcels post will, as before, mean a lot more of labor and trouble *making sales*. Again, *preparing* for shipment in many small parcels will mean a lot more work and trouble. There will be a much greater *chance of loss* from dishonest customers, since consumers will have much less sense of responsibility than dealers. Customers who are not bad enough to refuse payment altogether will be very likely to insist that the goods are not up to standard and so that they are not under obligation to pay the price agreed upon. The chance of loss in transportation will be much greater with many packages than with a few. Doubtless other considerations could be added to these.

(c) These facts are of course inconsistent with the notion that middlemen are mere parasites upon industry. They are performing services that have to be performed in bringing the original producer and the ultimate consumer together. They are overcoming real obstacles to the gratification of human wants. In doing these things, they are, of course, producing.

Problem 2

The reason given for affirming that internal commerce does not increase wealth is without any weight whatever. It would be just as reasonable to say the manufacturer does not increase the wealth because he merely changes the *form* of things; or that the railway does not increase the quantity of wealth because it merely changes the *location* of things. All that anybody does is to change the relation of things in such a way as to make them more useful to man than they were. Now, commerce does this in a great many ways—and one of them is the way indicated, that is, the *transferring of the goods from one person to another*—bringing about a *change of ownership*. There are various forms of production: time-production, place-production, form-production—and so on; and one of these is *ownership-production*—that is, bringing about a change of ownership from one person to another, e.g., from the man who produces to the man who consumes. This being a process which must be performed before satisfaction of wants is possible, pro-

viding for it is truly a productive operation. When it has been done, wealth is greater than it was before. It is very important to make the student realize from the first that *wealth is only a relative thing*. The same thing may be wealth or not wealth according to circumstances; so it may be less wealth or more wealth according to circumstances. Vastly the greater part of the wealth existing at any moment is inchoate, incomplete. Any process which carries it a step further toward completeness has increased the sum total of wealth.

Problem 3

From the economic standpoint, the "right price" is that price which correctly regulates our economic conduct. This definition naturally follows from the fact brought out above that under the present order the function of regulating our economic conduct is automatically assigned to price.

Problem 4

Be sure to give this problem ample emphasis. The point to be made is constantly overlooked. The precise nature of the injury that would result from the supposed change is the *diminution in the amount of cooperation and specialization which has hitherto prevailed*. If our foreign market showed a falling off of \$200,000,000, our loss would be nothing like that sum. That loss would be merely the diminution in the total quantity of goods we could enjoy, because of the fact that we were obliged to give up in some measure the plan of confining ourselves to producing goods which we could produce with small expenditure and using said goods to buy from other countries goods which we could produce only with large expenditure. In other words, our loss is merely the diminution in total income due to *giving up the degree and kind of cooperation* which we had formerly practiced.

Problem 5

Such a notion, logically carried out, would bring us to a purely autonomous economic system. That is, we should not trade at all and so should not specialize at all. For, of course, if we put the duty high enough, we can equalize costs however unequal at the outset. We can make the cost of getting Valencia oranges from Italy to northern Michigan as great as the cost of raising them in northern Michigan. Perhaps we ought to try to favor particular industries, and, in order to accomplish this, we perhaps ought to put a protective duty upon them equal to the difference in cost; but the implication of this speech that we should *always* do this—that as a matter of course we should equalize conditions and produce everything at home—is very silly indeed.

Problem 6

This is bad reasoning at either horn of the dilemma. The firm is not overcharging the householder nor is he underpaying the laborer. The householder, on the one side, is getting more than the repairs which the journeyman plumber is making. He is getting these repairs made without having been obliged himself to hunt up the journeyman, get together the materials and tools for doing the work, and so on. On the other hand, the journeyman who does the work is not making all the sacrifices involved. He does not have to manage the business in general; he does not have to keep an expensive stock of materials, tools, and so on; he does not have to assume a lot of debts many of which may turn out bad; he is paid promptly and certainly the amount which is agreed upon; and so on.

Problem 7

The rise of price in the case of failure in the wheat crop would be of social advantage in that it would lead to curtailment of consumption all along the line; and so the stock would not be exhausted the very first thing, but would be spread over the whole period between the two crops.

Problem 8

The objection alluded to is that a protective tariff, in that it is intended to hinder our buying goods from other countries, is equivalent to doing away in more or less measure with the cooperation upon which our high productive efficiency is dependent.

Page 39

Weak governments *could not protect us* against lawless elements that sought to deprive us of the fruits of our economic effort. Tyrannical governments and corrupt governments *would not* do so. Tyrannical governments would rob us *themselves*; corrupt government would *authorize others* to rob us.

Page 42**Problem 1**

The justification for the general education of the masses which has commonly been emphasized in this country is that such education is necessary where the people rule in order that they may be fit to perform this function wisely.

Problem 2

Remember that it is a fundamental feature of the present order that prices should constitute the chief regulator of our economic action,

and that it is the assumption of the present order that *freely determined* prices are the *right* prices for this purpose. But wages constitute one of the prices which are charged with this function, since they constitute the price of the service of labor, a most important factor in production. Wages, therefore, should never be meddled with unless this seems absolutely necessary. "Don't meddle with the thermostat." If you feel called upon to increase the income of the laborer try to do it in some other way, some way which will not tend to interfere with the proper regulation of our economic action.

Pages 51-52

Problem 1

I think it is fair to say that the conception of "produce" held by a man who calls all middlemen parasites is the same as the broad one with which we have been dealing. If he merely meant that in some refined sense of the word produce it was not quite proper to call middlemen producers, he would have no occasion whatever for calling them parasites; for a parasite certainly means someone who takes without giving in return. If, then, he makes parasite and non-producer synonymous, he must mean by non-producer one who contributes nothing and by producer one who contributes something.

Problem 2

If St. Thomas is a place where vessels can obtain coal, where they can be refitted, and so on, then St. Thomas is a place where contributions are made to utilities, to the production of wealth, and, consequently, it is a producing island.

Problem 3

The playing cards of a gambler without doubt have utility, that is, they have the capacity to satisfy wants. They also have value and are, therefore, wealth. A diamond ring no doubt has utility, that is, it has capacity to satisfy wants. Remember that questions as to the moral character of the want are not germane from our standpoint. Anything which satisfies a want, good, bad, or indifferent, has utility. If, in addition, it is too limited in amount or has a cost of production, it also has value, and so, is wealth.

Problem 4

(a) The six dollars certainly does represent an advantage received by the borrower. He wishes to anticipate the provision of the future; and the power to do so brings him some advantage, else he would not pay for it.

(b) It would certainly seem as if the lender could reasonably be credited with the production of the service described, for he is responsible for bringing it into existence.

Problem 5

There is no essential difference in the contributions of the persons named. All anybody can do toward production is to change in some way the relations of the objects. Now, everyone of the persons named does this. The deliveryman changes their place; and the groceryman, while contributing more or less to this same result, also helps to change the ownership of the goods, which is surely necessary to the final satisfaction of wants.

Problem 6

This is so thoroughly inconsistent and ridiculous that we can hardly believe that anybody was ever silly enough to say it. But it is a literal quotation from an editorial in an Ann Arbor paper. Of course, the Chinaman could not be earning anything if he were not giving something in return—that is, if he were not producing. The idea that he has not been a producer because he does not eat very much or because he carries away the pay for his services to some other country is too absurd for serious criticism.

Problem 7

(a) The wealth which I buy consists in the opportunity to occupy a seat in the concert room while the concert is being given. In other words, I buy a certain set of conditions. (b) The quartet did not produce wealth which I bought but produced only a part of it, which part, along with others, was assembled into the totality which I did purchase. (c) The person or company which is responsible for the giving of the concert produces the service which I purchase. In order to do this they hire the hall, provide for the lighting of it, and hire the services of janitors, ushers, and singers, and assemble all these into a totality which I and other people purchase.

Problem 8

(a) The quotation itself shows that the groups of persons named belong to the producing class in that it says they are *necessary* under the capitalistic régime. Anyone who performs any function necessary under a given order of things is, *under that order of things*, a producer in the only reasonable use of the word producer. Doubtless any writer is privileged to employ a narrower definition of producer if he thinks best; but he must be careful not to indulge in any moral condemnation

of non-producers if he does not employ an appropriate definition of producer.

(b) It is possible that the labors of various persons might be productive now while they would not be productive under socialism; for the change in the framework of economic society might make useless certain functions which are now necessary. This undoubtedly would not apply to the law profession as a totality, nor to middlemen as a whole—that is, there would have to be persons performing lawyer functions and there would have to be persons engaged in the selling of the products of the community to consumers. It is, however, very likely that the number of lawyers and middlemen required would be considerably smaller than under the present order. Bankers would still be required, but in considerably less numbers and with much less important functions than today.

Problem 9

The second clause does not furnish a proof of the first. The fact that any particular thing is essential to a certain result does not prove that it *alone* produces that result. The pollen of the flower is essential to the maturing of the seed; but it is not the only factor contributing to this result. Reasoning analogous to that used in the quotation could be used to show that land alone produces wealth, for, without land, no amount of effort will result in wealth. It seems almost incredible that such an argument should have any weight with intelligent people, but such is undoubtedly the fact. We should, consequently, take great pains to see that the matter is thoroughly cleared up in the student's mind.

Problem 10

(a) The conductor of the street car produces services. (b) He produces these services for the street car company. (c) The wealth which I buy when I ride in the car is produced by the company. The case is strictly analogous to that of the concert. That is, the company buys a variety of commodities and services, and assembles these into a totality from which I derive the service of transportation.

Pages 76-77

Problem 1

(1) The function of capital in connection with such a dwelling would be to "carry" those annual services of the dwelling which belong to the *future*, are from the immediate standpoint *idle services*.

(2) The reason why a family expecting to live in Ann Arbor only four years would prefer to rent a dwelling rather than buy it may

be brought out as follows. First, renting would commit the family only to buying *four* of the total annual services instead of *twenty*, and would actually involve their buying at any one time no more than *one-twelfth* of an annual service. But, secondly, the opportunity to choose this alternative brings the use of the house within reach of persons who have practically no accumulated wealth, while the alternative of purchasing the house—buying the whole twenty services at one time—would be absolutely impossible in the case of such a family.

(3) The last statements have by implication answered the third question. Under the ordinary rent contract, the tenant buys each time one-twelfth of an annual service of the dwelling.

Problem 2

Wright is not, strictly speaking, producing capital, for he is *not responsible* for the existence of the wagon as capital. It is not his waiting power that is going into the capital. He is *a mere agent* of the farmer who is about to buy the wagon, and he could not himself afford to bring it into existence if he were not to exchange it promptly for some form of immediate wealth. While the physical, technical production of the capital good is a vital part of the capitalistic process; yet, under our régime of exchange, the truly distinctive process of capital production is the accumulating of the buying power necessary to be the purchaser and permanent owner of the wagon.

Problem 3

The socialist contention suggests a point which is correct in that it suggests the point brought out on pages 68-69, that in a large degree, capital is really nothing more than congealed labor and land (also previous capital). The contention is not adequate in that it makes this the end of the matter: "producing with the aid of capital . . . is *merely* employing our labor and land in a different way." No other condition is required; anyone endowed with the power to labor in the necessary way and having control of the necessary amount and kind of land is *thereby* put into a position to employ these in the more efficient way. But this is obviously untrue: the power to labor and the power to control the needed land do not carry with them the power to employ them in the more efficient way; we must also have the power to wait—to be the owner of reserve goods.

Problem 4

Accumulations of money or bank credit do not of course constitute the real, final form of capital: this consists chiefly of the tools, machines,

materials, etc., which are used in production. Nevertheless, under present-day conditions, these final forms of capital come into existence mainly in response to the demands of the persons who have made accumulations of money or bank credit, or of the persons who have borrowed such accumulations. This could hardly be otherwise for two reasons: (1) with our extreme specialization, the producer wishing particular forms of concrete capital will seldom be the producer of such forms; and (2) the incomes of those who are ultimately responsible for bringing capital into existence—and such incomes are, of course, the sources from which their capital must come—are, in the great majority of cases, incomes of money or bank credit; so that, if these persons are to produce capital at all, they must do so in the first instance by accumulating funds of money or bank credit.

Pages 79-80

Problem 1

Without capital, invention could have accomplished little or nothing; for the application of the new method, in practically all cases, involves the possession of a very considerable amount of capital. That is, it is necessary that somebody should have the resources which enable him to wait for results, enable him to put thousands of dollars into the making of the capital goods, such as steam engines, machines, the rolling stock for a railway, etc., which are necessary but do not give immediate returns. It is, therefore, a mistake to think of the inventor as the only person responsible for improvement in methods. We must have as well men of wealth who have the waiting power, the capital.

Problem 2

The pursuit of forestry as a private business had to wait till capital was relatively abundant—more abundant than was necessary for the pursuit of, say, wheat-raising—because of the greater length of time which must intervene between the initial processes and their consummation in a finished product. In the case of wheat-raising, only a few months are usually necessary between the beginning of the process of wheat-raising and its end. In the case of forestry, the period is vastly longer. For the better types of lumber the waiting period is seventy or eighty years. Even in the case of the rapid growers, which furnish cheaper forms of lumber and various other useful products, fifteen to thirty years is necessary. Thus, society must have reached a stage in which producers could afford to wait a very long time, if forestry is to be pursued as an ordinary industry.

Problem 3

This is the same old fallacy which makes labor — manual labor — the sole producing factor. In this particular case, the fallacy is especially aggravated because the impression is given that the total product must be credited to *the particular manual laborers who happen to be in the strike*. Obviously, this mill is using materials, machinery, etc., all of which are products of previous labor; so that, if we were to admit that manual laborers alone were responsible for this wealth, we should have to include a lot of manual laborers besides the particular groups that are being employed in the mill at the time in question. But, overlooking this error, the obvious fact is that there are *other necessary elements of production* here besides manual labor; that is, we have here the directing skill of the manager himself, his accepting the responsibility of production, and his furnishing the factor of waiting, etc.

Problem 4

There must be managing, there must be selling of goods, there must be bookkeeping, and so on. People do not usually intend to include these when they talk about working with one's hands. Doubtless the majority of well-informed socialist leaders would admit that there are other kinds of labor that are truly productive besides those which are ordinarily called manual labor. But nevertheless it seems quite certain that the rank and file, as also not a few leaders and intelligent sympathizers, are for some reason committed to the notion that manual laborers are the sole producers. We cannot exert ourselves too much to get rid of this thoroughly fallacious idea.

Problem 5

This is too easy to need comment. It is of course well illustrated by the case of the fisherman who gets enough dried fish ahead to enable him to spend his time making a net.

Pages 87-88

Problem 1

In the case of cooperative production so-called, the entrepreneur is constituted by the body of workmen themselves who own the business. The statement quoted is based on the quite untenable analysis, still more or less in vogue, which makes the function of the entrepreneur to be management. As we have seen over and over again, management is a thing which can be hired and hence is a form of labor merely. The office or function of the entrepreneur is that which is left after every-

thing which can be hired has been eliminated, and this as we know is *taking the final responsibility of the business*.

Problem 2

(a) The answer is, plainly, no. It is characteristic of any exchanging or cooperating régime that the man should expend his effort upon one thing and enjoy some other thing.

(b) The answer is again, plainly, no. Even if we grant that manual laborers only produce, it is still plain that this particular group of workers, the masons, hodcarriers, carpenters, and so on, who are constructing the palace, are not the only manual laborers who are responsible for its existence; for there have been brought over from past labor stones, mortar, materials of all sorts which can by no stretch of generosity be credited to this particular group of laborers.

(c) Finally, it is evident, as in the preceding cases, that there are other factors in the case besides manual labor which are indispensable to the product, especially waiting power and power to assume the responsibility of production.

Problem 3

The feature of modern industrial organization which makes it absurd to represent managing as the special function of the entrepreneur is the conducting of business through *corporations*. Here, obviously, the entrepreneur does not manage, or anyhow only in very slight degree, since he hires officers who perform this task for him. The real entrepreneur is the corporation or the individual shareholders viewed as incorporated.

Problem 4

Unless much of our labor were devoted to the doing of things which can be rewarded only at a later time, there could be little or no round-about production and hence no capitalistic production; for, as we have seen again and again, the essential feature of capitalistic production is the *indirectness* of the method, the fact that it makes intermediate goods before getting at the making of the final consumption goods.

Again, it would not be feasible thus to devote a large share of our labor to producing for the future, unless the persons doing the work or someone for them were so situated that they could spare this labor from the producing of goods needed at once—in short, could *postpone their consumption*. But, obviously, under modern conditions, this particular function is performed by those persons who accumulate funds of money or bank credit, loan these to entrepreneurs, and receive from time to

time at later dates a per cent return—that is, these persons are the ones who forego the gratifications to which their incomes entitle them, in order that we may pursue roundabout methods. But they are, of course, the persons who are designated. This, therefore, is the function of capitalists.

Problem 5

We say the stockholder is an element in the corporate entrepreneur, because he bears final responsibility in the case. The bondholder is not, because he does not bear final responsibility—does not assume risks—but is assured the return of his capital and an income therefrom anyhow. Doubtless in practice, as in all cases of this sort, the lines cannot be drawn as absolutely as we draw them in theory. The bondholder almost inevitably does take some risk. But this risk is with most corporations reduced to a minimum. Broadly speaking, the risk involved in production is assumed by the stockholder himself.

Problem 6

The two roles of Mr. W were entrepreneur and promoter. That is, the fact that he put some of his own property into the concern made him an element in the corporate entrepreneur. On the other hand, as the person who induced people to start the enterprise—establish the business—he is a promoter.

Page 94

Problem 1

Because the company has a large output, there is need for a vast number of operations of each special type; and so each man can be kept busy doing just one thing.

Problem 2

(a) This signifies the practice of devoting one country or section of country to the production of some one commodity or class of commodities. It seems to me better to think of it as geographical specialization, since the name "geographical division of labor" implies that this has to do with labor only.

(b) The devoting of western Michigan to fruit-growing, or of southern California to the raising of citrus fruits, furnishes a good illustration.

Problem 3

I used to give for this purpose the practice which carpet or wall paper factories have of employing real artists to make designs for them. I presume the reader or instructor will think of more recent and better illustrations.

Problem 4

Mr. Dowrie suggests as a good illustration of this the automatic machine used in the condensed milk factories of Illinois for testing packing cans. These, of their own motion, throw out milk cans which leak. He also suggests the automatic machinery for sorting apples, as respects their size, which is used in Washington and Oregon.

Problem 5

This difference between the practice of the country store and that of the city store is due to the different *extent of their markets*. The country store cannot afford to devote itself to the selling of one particular product, since the demand for one particular product will not be large enough to keep the plant and help busy.

Problem 6

(a) The great gain from having a world market is the possibility of very *high specialization*.

(b) The industrial change which more than any other thing has contributed to the development of a world market is improvement in the means of *transportation*.

(c) One of the most serious evils of the large-scale market is the mal-adjustment between production and demand. It is much harder for producers to make a reasonable estimate of what amount of products they are likely to be able to sell with a large market than when their market is relatively small. Another evil flowing from the large-market system is the low standard of products. There is greater difficulty in inducing producers to maintain a high quality in their products. The consumer is too far away. The producer often seems able to impose almost anything on careless or heedless retail buyers.

Pages 100-101

Problem 1

This illustrates the increase in specialization made possible by largeness of scale.

Problem 2

The fact that the new bank has a paying teller and a receiving teller, a discount clerk and a collection clerk, and two kinds of book-keepers, illustrates the increased specialization made possible by largeness of scale. The fact that the new bank has eight employees while the five old banks had twenty, illustrates the power of the large concern to economize by utilizing more completely its various factors.

Problem 3

(a) The stocks of different kinds of goods would not need to be as large in the case of the one big store as the sum total of the stocks needed in the five small stores. This is due to the fact that the stocks are largely of the nature of contingent reserves, reserves held in order to meet unexpected calls. But in cases like this, as in all cases where the element of chance is involved, the pooling of reserves diminishes the amount required. Thus, if fifty students go to Chicago to see a football game, each one would feel obliged to carry a little more money than he was quite sure to need, in order to be prepared for emergencies. But, if the fifty pooled their necessary reserves, the total sum required would be much smaller than the sum of all the reserves that would be carried individually. For example, if each one needed to carry, say, five dollars extra, the whole fifty would not need to carry \$250 extra. On the contrary, a reserve of \$50 would doubtless prove ample. See page 96 (2).

(b) Since, according to the above explanation, the stock would be smaller, the building space needed would be smaller; but this latter is of course fixed capital.

So, too, the cost of building space needed for showing goods, dealing with customers, etc., would not increase proportionately to the increase in the number of customers.

The heating plant needed to take care of one large store would not be five times as costly as the smaller one required for each of the five different stores.

Pages 113-114**Problem 1**

(a) Under the present order of things, the first stage of capital-building is accumulating a fund of money. But this would be in itself worthless, unless it were followed or accompanied by the production of goods-capital, that is, tools, machines, etc.; for these are the real things which are required to increase the productive power of the community. Now, merely increasing the quantity of paper money does not in itself promise to increase the quantity of capital of the final form, that is, the tools, machines, etc., which are really needed.

(b) It might be argued that the increase in the immediate demand for labor would raise nominal wages, hence would stimulate laborers, and so, would finally increase real products, including the various forms of goods-capital. Further, this introduction of paper money into the system would relieve us from the necessity of replacing all of our

metallic money stock which should later wear out. This would of course save labor power and other resources which we could utilize in the creation of true capital. That is, in the long run we might gain something in real capital because of having put into the system this purely nominal capital, paper money.

(c) Supposing our community not to have been increased in size, it presumably would not need the addition to its money stock brought about by the new issue of paper. Accordingly, some portion of the metallic currency would tend to be displaced and sent out of the country, to be exchanged for the products of other communities. Further, these products might easily be cars or rails or machinery, or some other kinds of goods-capital. In this way, therefore, the issue of mere paper money might after no long time considerably increase the real capital of the community. In such a case, the issue of the paper money practically amounts to substituting a very inexpensive instrument in place of an expensive one already in use which we can dispose of to our neighbor in return for other useful goods.

Problem 2

Instead of employing his surplus in the purchase of goods-capital, our present-day capitalist could make a practice of using such surplus to satisfy new wants, indulge new tastes. In that case, producers would be busy making the things which our capitalist wanted for these purposes, instead of making the goods-capital which are now produced and sold to him. It follows, therefore, that if a man would accumulate capital he is obliged to go without something which he might otherwise enjoy just as truly as was our primitive fisherman. Hence, the creation of capital, even under modern conditions, involves saving.

I hardly need say that the argument quoted does not merit serious consideration. Our only excuse for bringing it out at all is its appearance in popular socialist literature. To the student it surely must be plain that the fact that, under our present order, the capitalist does not have to save literal goods, such as the dried fish of our primitive capitalist, is a mere accident of our elaborate system of specialization and co-operation through money exchange.

Problem 3

Surely, yes. The capitalist indicated might have spent his resources making things which he could consume immediately, instead of making the goods-capital. He therefore saved in the sense of not enjoying immediately goods which he might have enjoyed.

Problem 4

Yes, this way of building capital would involve saving; for each man might have used this extra hour in producing something fitted to satisfy his immediate wants.

Page 116

Problem 1

It is natural to expect capital to increase more rapidly in England than in Scotland because, on account of the higher productive capacity of the former, its per capita income is larger than that of Scotland.

The same is true for Germany as compared with Persia.

Another reason why capital accumulates in Germany more rapidly than in Persia is found in the fact that Germany gives much greater security to property than does Persia and so encourages capitalists to accumulate.

Problem 2

No. It is easy for people of large incomes to accumulate capital, while it is very difficult for people of moderate or small incomes to do so. What we commonly call the lower middle class in a country like the United States seems to show relatively small power of accumulation. Accordingly, it seems probable that in an order under which the inequality of incomes was greatly reduced and so all incomes became moderate incomes, capital would accumulate quite slowly.

Problem 3

The postal savings bank encourages saving, especially among those who are in a position to set aside only very small amounts. The ordinary bank would be loath to open accounts for such persons at all.

Loan and trust companies assure good care for large accumulations.

Insurance companies encourage accumulation among people of middle class incomes—people who would probably save very little on any other plan. Early in life such persons decide to take out an insurance policy, and they get in the habit of looking on the payment of the premium required as something almost as necessary as the payment of grocers' and butchers' bills. Saving of the business man's type seems beyond them. They are always living quite up to their incomes.

Problem 4

This guaranteeing of bank deposits must surely tend greatly to encourage the accumulation of capital.

Problem 1

You would naturally expect this condition of things to drive foreign capital out of the United States.

Problem 2

This case is analogous to that of the stock of the one big store over against the stocks of the five out of which it was made. Each one of the five hundred persons supposed to be depositors in the bank would need to have a certain fund of reserve to meet unexpected demands. If, now, the five hundred combine to keep their reserves in a common reserve, said common reserve does not need to be five hundred times as large as the reserve of one of them independently would need to be. In fact, one-third or one-quarter of such a sum would doubtless prove ample to meet unexpected calls. Here, then, is a great saving in the amount of the deposits that must be kept idle. The remainder may safely be put to various uses by the banker.

In addition to the saving above described, another one results when depositors in a bank make payments to each other by means of checks. In these cases, if it be assumed that there would generally be occasion for reciprocal payments, said payments would require no money at all but would merely involve the transfer of credit from the account of the payer to that of the payee. From these and various other causes, banks find it possible to utilize anywhere from 75 to 90 per cent of their deposits.

Problem 3

Yes. The bonds can be disposed of at a much lower rate of interest than could individual mortgages. For this there are two reasons: (1) A bond is much more marketable than a mortgage and hence will be taken at a lower rate of interest. (2) The joint guarantee of the agricultural loan association gives greater security, and so these bonds will be taken at a lower rate.

Page 121

Problem 1

(a) The monopoly assured by patent laws stimulates invention.

(b) This monopoly also makes capital more ready to try out new projects than would otherwise be the case. This second consideration particularly needs emphasis, because the general public are too likely to think that the only proper purpose of the patent is to stimulate invention—that the failure of the inventor to get the total reward involves much injustice and social disadvantage. The fact is that the social

welfare quite as truly requires the stimulation of capitalists to exploit new inventions as it does the stimulation of inventors to work out their inventions.

Problem 2

Our overliberal policy has at least stimulated the discovery and development of the resources alluded to.

Problem 3

Rapid transit by electricity was a new scheme of doubtful success. Liberal franchises were probably necessary to insure its being tried out.

Problem 4

(1) The policy indicated would diminish that great absolute waste of capital on fake enterprises which characterizes our present policy.

(2) It would save for business a considerable volume of capital which, if not entirely thrown away, is at least changed from the status of capital to that of income for a lot of wasteful rogues.

(3) The new policy would encourage enterprise among those prudent investors who, under the present order, are made overcautious by the rascality of promoters.

Page 129

Problem 1

28; 14.7; 18.375; 14.

Problem 2

Twelfth; twelfth; twelfth; sixteenth. You would naturally use the one showing the same proportion as the N's and L's in your possession.

Problem 3

Three times 290, or 870. You use the twelfth combination showing the same proportion as your stock of N's and L's. Three times 312. Three times 330.

Page 138

It is true that "the guests are also cooks," but, if the law of diminishing returns is operative, the addition to the food supply made by the new guests will not be as great as the previous average. In consequence, each would be better off had there been no new guests.

Page 139

The law is two-headed. Because the returns, though increasing, are not increasing *proportionately*, the price of wheat rises. Because the returns, though not increasing proportionally, are, after all, *increasing*, the price of wheat does not rise as high as it otherwise would.

(1) Increasing returns; in some combination before the ninth. The plant was made for a larger output; the present small demand compels the management to work it in a *too early* combination.

(2) In some combination near that of the highest efficiency or least cost. Increase in demand makes this possible.

(3) In some combination *later* than that of the highest efficiency.

Page 145

Restrictions on immigration would tend to check the increase in population. The check on population, without a corresponding check on the increase of capital, would tend to bring about a higher marginal productivity of labor. This, in turn, would, under the hypothesis, tend to raise wages.

Page 151

In the former case, we should be using it in one of the increasing-returns combinations, because of small demand. In the latter, we should be using it in one of the diminishing-returns combinations but one earlier than the least-cost one—still because of too small demand.

Pages 152-153

Problem 1

If the demand for a manufactured product is extremely small, producers in that field cannot get the advantages to be derived from large-scale production, and so the cost is high. On the other hand, if the demand is extraordinarily great, the industry which supplies the raw material needed may be carried so far into the stage of increasing cost that the cost of such raw material becomes much the largest part of the total cost of the product and hence this increase in the cost of raw materials more than offsets any cheapening at other points. Add to this that the possibility of further diminishing cost by enlarging the scale of production may have been exhausted, and in consequence there is *no* cheapening at other points to be offset.

Problem 2

In his opinion, up to 1900 the population was too small to utilize effectively the natural plant considered as a whole. Doubtless many parts have already been utilized much beyond the point of highest efficiency; but this may not be true of the totality. If we suppose improvements to go on until the systems of communication between the different parts of the country are perfected, and so the power of all the different sections to work together is increased to its utmost, and until our power to utilize each special feature, e.g., the water transport system

of the Great Lakes, the tropical fruit district of southern California, the water powers of the mountainous districts, is carried to the highest point, it seems natural to expect that the total output of the country would be increased much more than is the labor and capital expended.

Pages 158-159

Problem 1

The different conditions under which copper is mined vary greatly in respect to the difficulties and so the *costs* of production. These differences concern richness of veins, intractability of the ore, the depth to which it is necessary to go, the distance from the chief markets, etc. Again, mining will normally begin with the less difficult, and so cheaper, conditions; and will progressively go on to the more costly as the demand, and so the price, rises. It follows that an attempt to increase output will generally give us the condition of increasing cost.

Problem 2

It is quite impossible to believe that the cost of mining copper is graded in such a way that every pound or every hundredweight or every ton of increase in the output means an increase in cost. When the veins capable of being worked at 20 cents per pound are exhausted, the next ones perhaps show a cost of 25 cents, so that the marginal cost advances. But it is in the highest degree unlikely that these newly opened levels are limited in output to a few pounds or a few tons. Instead, they probably will yield thousands of tons at substantially the same marginal cost. But, if so, copper mining is at this stage a constant-cost industry.

Problem 3

- (1) Any one car could usually hold some more people.
- (2) Any one locomotive could usually pull a given train even if more cars were added.
- (3) The same track would usually be able to carry not a few more trains.
- (4) The terminal facilities could usually supply more service without any increase in equipment or working force.

Doubtless times will come when the most expensive parts of the plant have been utilized to their limit and must be replaced on a large scale. In that case the railway will, for the time being, probably have reached the stage of increasing cost. But just as soon as the new equipment has been introduced, said railway will be once more in the stage of diminishing cost.

Problem 4

Increasing cost. The demand for the commodity is so limited that the most efficient methods of production cannot be utilized.

Problem 5

- (a) Constant-cost goods.
- (b) Increasing-cost goods.

Problem 6

The expenditures named constitute a relatively small part of the cost of farm products—using cost in the broadest sense. In large measure, the farmer's products are a return to the services of his land and his own labor.

Page 166

Since gold is the standard of value, that is, since the meaning of the dollar is fixed by a certain quantity of gold, then, of course, the value of that quantity of gold measured in American money will always be one dollar; and the value of any other quantity of gold—say one ounce or 480 grains—measured in American money will be as many times one dollar as the amount of gold in one dollar is contained in one ounce or 480 grains. Since the quantity of gold in a dollar, 25.8 grains standard fine, is contained in 480 eighteen and sixty one-hundredths times, therefore the ounce of gold, standard fine, must be worth \$18.60, just as long as we continue to maintain the present standard.

Page 168

- (a) \$100.
- (b) The money unit would have gone down.
- (c) The money unit would have gone up.

Pages 173-174

Problem 1

Be sure to work out the idea that there must be a double coincidence both in respect to the kind of goods exchanged and the quantity. One coincidence in kind consists in the fact that the other man wants the thing you have to dispose of. The other coincidence in kind is that at the same time he has for disposal the goods that you want. This is a double coincidence in kind. An analogous double coincidence in quantity is also required.

Problem 2

A favorite illustration of mine has always been the experience of a farmer friend with whom I was boarding in the winter of 1878. He

was arranging to barter cord-wood for a new cutter. What should be the ratio of exchange? Naturally, the procedure adopted was to divide the money market price of a cutter by the money market price of a cord of wood. That is, money was used to measure the value of each; and then the proper ratio of exchange became a mere matter of division.

Problem 3

(a) Primitive communities are too poor to use much money in the strict sense, i.e., a something specially set apart to perform money functions. Such a community, therefore, employs as a medium of exchange goods which will be needed for other purposes if they are not being used as a medium of exchange. For a similar reason, such a community employs goods which are sure to be had in abundance among them, that is, goods which they themselves produce, e.g., tobacco in Virginia in colonial times.

(b) Another reason for employing as a medium of exchange goods which are desired for direct use is this: Until confidence in the stability of custom or legal arrangements had reached a high development, men would hesitate to risk very much of their wealth in a form which depended for its continued value on custom or legal arrangements. That is, paper money or any other merely representative money would be received only for amounts too trifling to involve the risk of any considerable loss. For all larger sums, men would insist on receiving something which carried its security in itself, i.e., something the value of which could be realized in utility if necessary.

Problem 4

Congress got around to this opinion at about this time, because the discovery of gold in California and Australia greatly lowered the value of gold, or raised the value of silver as measured in gold, and as a consequence, gold became the standard of value while silver went to a premium, a fact which was quickly followed by the withdrawal of the smaller silver coins from circulation. To remedy the inconvenience thus resulting, Congress provided for putting the fractional silver into the position of subsidiary coin, i.e., they reduced the amount of silver in the dollar from $412\frac{1}{2}$ grains to 384 grains.

Problem 5

During the years named there was much agitation in favor of the free coinage of silver which would, of course, have meant a silver standard having little more than half as much value as the existing gold standard. Creditors, naturally, tried to guard against the possibility of being paid back according to this lower standard.

Problem 6

This means that the value of the peso, the Philippine unit, rises or falls with the value of 12.9 grains of gold .9 fine.

Problem 7

The precise issue of this controversy was as to whether the monetary standard should be the value of 25.8 grains of gold, or the value of a greenback dollar; in other words, whether the value of one dollar should be determined by the value of 25.8 grains of gold or by the value of a greenback dollar. The creditors of the United States were perfectly willing to be paid in greenbacks, provided they received for each dollar a value equal to the value of 25.8 grains of gold, multiplied by as many times as the number of dollars in the debt due them.

Pages 184-186

Problem 1

This check was drawn in Ann Arbor, mailed to the Newcomb-Endicott Company of Detroit, indorsed by them, and deposited for credit with the Peninsular Savings Bank of Detroit. It was then indorsed by said bank payable to the State Savings Bank of Ann Arbor, mailed to said State Savings Bank of Ann Arbor, by them presented at the Clearing House in the Ann Arbor, settled by the National Bank of Ann Arbor, on which it was drawn, stamped as paid by the State Savings Bank, thus leaving it in the hands of the National Bank of Ann Arbor until settlement with you.

Problem 2

(a) See form D or I in McMaster's "Law of Commercial Paper." The payee should be T. C. Craig's bank, say, the First National Bank of Detroit; the drawee should be H. T. Crouch in the left bottom corner; the drawer should be T. C. Craig.

(b) This is the ordinary check. Payee, T. C. Craig; drawee, H. T. Crouch's bank; drawer, H. T. Crouch.

(c) Ordinary bank draft. Payee, Craig; drawee, the New York bank which is the correspondent of Crouch's bank; drawer, Crouch's bank at Erie.

Problem 3

(a) If the transaction named were settled by a sight bill of exchange, its course would probably be as follows: T. C. Craig of Detroit would deposit it for credit with the First National Bank of Detroit. The First National would mail it to their correspondent in New York, and credit themselves with the proceeds. Their correspondent in New

York would mail said bill to their correspondent in Erie; or if they had none, to their correspondent in Buffalo or Pittsburgh, or some other neighboring place. In the latter case, said Buffalo or Pittsburgh correspondent would, in turn, mail the bill for credit to his Erie correspondent. Once the bill has reached an Erie bank, it would then be presented to Henry T. Crouch for collection. It is always possible, when enough bills of this sort are drawn by a particular house upon some other house, that the bank with which the drawer deposits should establish direct relations with some bank in the town of the drawee—in this case Erie. If such conditions are fulfilled, the journey of the bill will obviously be much shorter.

(b) If the transaction named were settled by a check, the starting point would be in Erie with Mr. Crouch, who would draw the check on his bank in Erie, mail said check to T. C. Craig of Detroit, who, in turn, would deposit it with his bank in Detroit, say the First National, after which the check would take a journey similar to that supposed for the bill of exchange, except that, after reaching Erie, it would be collected, not from Mr. Crouch, but from the bank on which it was drawn through the Clearing House. This only needs to be added: that the course of a check is often more roundabout than that of a bill of exchange. Not having any security with it in the shape of a bill of lading, and manifestly being private in character, there is considerable likelihood of some exchange being collected in the course of its settlement. Each bank receiving it, therefore, attempts to avoid paying for collection by sending this check to some correspondent; and in the effort to deal only with a correspondent, it may prove necessary to avoid the natural and direct line to the place on which the check is drawn.

(c) If our transaction were settled by a bank draft, its course would probably be as follows: Said draft would be purchased by Mr. Crouch of his Erie bank which draws it on the New York correspondent of said Erie Bank. It would then be mailed like the check to T. C. Craig of Detroit; then deposited by Mr. Craig with the First National of Detroit; then sent to their New York correspondent for collection from the drawee, that is, the New York correspondent of Mr. Crouch's bank in Erie. Thus the bank draft would probably take the shortest journey of these three sorts of paper.

Problem 4

Our trade with Great Britain easily develops a medium of exchange for our trade with Brazil in this way: when we sell cotton or wheat

or meat to Great Britain we draw a bill of exchange against such sale upon the consignee in Great Britain; such bills we turn over to Brazilian exporters from whom New York purchases coffee or sugar, and they are accepted as adequate payment for said coffee or sugar, since Brazil buys a large amount of manufactured products from Great Britain, and hence has need for credit upon bankers in Great Britain.

Problem 5

No. 1	Debit	.....	\$5,663.87
No. 2	Credit	.....	4,164.97
No. 3	Credit	.....	1,774.84
No. 4	Credit	.....	3,745.64
No. 5	Debit	.....	4,021.58

Problem 6

(a) The total volume of the transaction involved must have been the sum of all the claims against the five banks. The mistake to be guarded against here is counting these sums twice over. In order to compute the balance against each bank it is necessary to construct five tables, analogous to those given in the book, but showing the *debits* of each bank instead of its credits. The student might then slip into saying that number one has credits to the amount of \$7,006.45 and debits of \$12,670.32, or a sum total of \$19,676.77, and so with the rest; and that, consequently, the total volume of business is the sum of all these ten items, or \$76,700.44. In fact, of course, these have all been counted once when we have computed either the debits of a bank or its credits; and so we must not count both. (The actual sum of all the claims is \$38,350.22.)

(b) The amount of actual cash needed is the sum of the debit balances or the sum of the credit balances, that is, \$9,685.45. This sum the debtor banks bring in at, say, twelve o'clock, and ten minutes later it is paid over by the Clearing House manager to the three credit banks; and hence the whole sum is needed to effect transactions which involve payments amounting in all to \$38,350.22.

(c) The per cent of the total volume is obtained by dividing the \$9,685.45 by the total volume of transactions—\$38,350.22—which gives us about 25 per cent.

(d) The significance of these facts is that under a credit system such as ours a vast volume of transactions can be carried on with a very small quantity of actual money.

Problem 7

The English business world makes much greater use of credit media of exchange than does the French business world. In consequence, the former has need of much less money to transact a given volume of business than has the French business world.

Problem 8

Barter means really direct exchange of commodity A against commodity B. Mediated exchange is exchanging commodity A for an intermediate good—a middle term—and using this intermediate good to get in exchange commodity B. Obviously, we continue to do this, even when the intermediate good is the right to money instead of money itself. In fact, we are still using money, but using it in such a way that a large saving in the amount needed is effected. A good way to clear this up to your own mind is to show yourself that there could be a system of credit *barter* exchange with cancellation just as there now is a system of credit *money* exchange.

Problem 9

If I wish to buy a bank draft for £200 on London when London exchange is \$4.855, I ought to be able to get it for 200 times \$4.855, that is, \$971.

Problem 10

Our wheat exporter ought to get for his London bill 1375 times \$4.87, in the first case, that is, \$6,696.25; and in the second case, 1375 times \$4.84, that is, \$6,655.

Problem 11

Under the first hypothesis, the importer's profit would be:

$$50 \times 12 \times 12 \times .95 \frac{50 \times 12 \times 12 \times 44 \times 4.84}{12 \times 20} ; \text{ that is, } \$451.20.$$

Under the second hypothesis, the importer's profit would be:

$$50 \times 12 \times 12 \times .95 \frac{50 \times 12 \times 12 \times 44 \times 4.87}{12 \times 20} ; \text{ that is, } \$411.60.$$

Problem 12

The next to the last problem shows that an exporter naturally makes more profit on a transaction when exchange is high; and, in consequence, high exchange tends to stimulate exports.

The last problem shows that an importer naturally makes higher profits when exchange is low; and, consequently, a low rate of exchange tends to stimulate imports.

Problem 13

By deposit currency we mean the bank credit created by deposits, which is widely used as a medium of exchange instead of literal money. Among writers this particular phrase is most affected by those who are inclined to look upon bank credit, not as a method of using money economically, but rather as a medium of exchange different from money.

Problem 14

In the fall of the year you would expect to find the exchange on Europe near the lower gold point; that is, \$4.835. The reason for this is that in the fall of the year we are selling to Europe much more than we are buying from Europe. In consequence, the volume of credit on Europe is very large; and hence its price, as measured in the rate of exchange, is lower.

Problem 15

In America, when a man makes a loan at a bank, he does not as a rule take out the proceeds of his loan in the form of money. On the contrary, he deposits those proceeds to his credit and continues to draw checks against that deposit just as if he had deposited money. Since the practice of carrying on business with money borrowed from the banks is very extensively employed in America, the volume of deposits arising by this process is very great.

Pages 193-195

Problem 1

(a) The principal thing to be gained by maintaining trade relations with the outside world is that cooperation with other nations which enables us to specialize in those industries where we show greatest efficiency, and thus increase the quantity and quality of the goods which we in the end enjoy.

(b) It would be to our advantage to have our foreign trade bring in a money balance, provided special circumstances, say a panic, had made us particularly short in money—or provided we were not producers of gold and for some reason or other wanted to add to our stock.

Problem 2

A nation, which sends out a dollar in exchange for foreign goods worth a dollar, is neither richer nor poorer as a direct result of the transaction. Looking more deeply, however, it is really richer; for

this exchange is merely the consummation of a system of specialization and cooperation which makes the nation far more efficient economically, and so, far richer than it would otherwise be.

The case of the individual is not materially different. If we are not cheated, spending a dollar makes no immediate change in our economic status. Doubtless, however, the word "spending" is here used in a sense which gives some point to the contention that by spending the individual makes himself poorer. That is, the word is often used to mean *buying things which must be consumed soon*, or anyhow will rapidly deteriorate in value, whereas the money paid out would have kept its full value for an indefinite period; so that the act of spending in this sense tends in the end to lower our economic status.

Problem 3

This cannot result *immediately*, since immediately we make our purchases not with money but with some instrument of credit. On the other hand, it cannot result *ultimately*, since, in the long run we must pay for goods bought with goods produced and sold; that is, we must make a great many sales as well as a great many purchases. The credits thus created we set over against our debits and pay or receive in payment only the balance. As a matter of fact, we send out only a very small fraction of the cost of our purchases in actual money.

Problem 4

The facts indicated would show that a very large proportion of the business transactions of the community during that day were effected with credit media of exchange instead of with money; for the materials received by the banks as deposits in the course of a particular day show in a very large measure what instruments of exchange have been employed in the business world during that day. This grows out of the fact that most business houses are patrons of banks and near the close of the day deposit with their bankers almost all the money or money substitutes which they have received in the course of the day's transactions. If, therefore, the deposits of banks are chiefly checks, the business of the day has been mostly conducted with checks. Doubtless some business transactions have taken place during the day which did not result in deposits with the banks; but the proportion of these is surely small and would not materially alter the general result.

Problem 5

Whether or not a government loan wastes capital turns entirely on what disposition the government makes of the proceeds. Such a loan

puts at the government's disposal a certain amount of resources. If these resources are used to satisfy immediate needs, whereas the capital, if left with private persons, would have been used productively, then capital is wasted. If, however, the government uses said capital to construct a Panama Canal, it is really consummating the process whereby capital is created, just as much as the use of it by private persons would be doing this. The fact that the literal money borrowed remains in existence would have no bearing upon the case. This would be true anyhow. Money is a bit of social machinery of a highly durable character which lasts almost indefinitely, needing only small additions to keep it intact, like such permanent forms of capital as roads, canals, etc. As far as capital *production* is concerned, money is merely a form in which such capital momentarily appears when it is first brought into existence. There is no complete creation of capital, no consummating of the process of producing capital, unless we go on to the construction of products used for productive ends. If we fail to do this, using resources destined for such ends to fight useless wars or support worthless favorites, we waste capital, though, of course, the total stock of money is not altered in the least.

Problem 6

(a) It is quite certain that we did not permanently lose 110 million dollars in gold because we hired foreigners to carry our goods. The obligations which we incur by hiring foreigners to carry our goods, like other business obligations, are immediately settled with checks and drafts. They therefore simply pass into the great volume of indebtedness which we have toward other countries and are liquidated just like other forms of such indebtedness by being set over against claims or credits which we have on other countries. Now, in the long run, there is but one way of creating these credits against other countries, viz., by selling those countries goods or services which we can advantageously produce in excess of our own needs. We can no more afford to use our money circulation for the purpose than we could afford to burn our furniture to keep the house warm. Later the student will learn that, if we were to try to do so, our purpose would be defeated by the automatic working of the market. Here a few facts will suffice. In the year Mr. Blaine made the speech from which our quotation came, we imported 97 millions more gold than we exported. For the twenty-three years from 1879 on, in spite of the fact that we were among the chief producers of gold and so would naturally have some surplus to sell, the net movement of gold was an *import of 93 millions*.

(b) It is quite certain that we did not part with any such quantity of gold even temporarily. As already said, we pay for such services with checks or drafts just as we pay for any other foreign products.

(c) It is not likely that we should have been richer, had we done this carrying of products ourselves. Doubtless the reason why our capitalists do not direct their productive resources into this channel—the carrying trade—is that they find themselves able to get greater profits in other channels. But presumably they are able to get these greater profits in other channels because in these other channels their resources are more productive, more efficient. If, in spite of the natural tendency of things, we had quit producing the other goods and turned our attention to the carrying trade, we should without doubt have produced a smaller total of wealth than by doing what we actually did do. Of course it may be desirable *on other* grounds to make the sacrifices necessary to develop a merchant marine.

Problem 7

Without any regard to the wisdom or unwisdom of spending the thousand dollars on the fireworks exhibition, this reasoning is quite fallacious in respect to the final results in the case. The best way to make this clear is to strike the balance of ingoing and outcoming for each of the two parties concerned. The man who bought the fireworks parted with \$1,000. There is a minus item. He received in return \$1,000 worth of fireworks. Here we have a plus item. Finally he fires off the fireworks disposing thus of the \$1,000. Here we have a second minus item, making two minus items of \$1,000 and one plus item of \$1,000. The net result in wealth in possession is obviously a minus \$1,000. On the other hand, the man who sold the fireworks received \$1,000 in money, in return for which he gave \$1,000 worth of fireworks. Here we have a plus item of \$1,000 and a minus item of \$1,000, leaving a net result of zero gained or lost. Thus the transaction on one side results in a net loss of \$1,000 and on the other side leaves no loss or gain. The total, then, is a loss of \$1,000. Of course this does not mean that the transaction was of no advantage. The buyer of the fireworks was \$1,000 poorer and no one else was a \$1,000 richer. But the buyer obtained the gratification of wants, derived from the firing off of the fireworks.

Problem 8

The fallacy here is essentially the same as in Problem 7. The people who paid the taxes parted with, say, 20 millions of dollars, for which, as far as the data of the problem go, they received no equivalent.

There is thus on this side a clear loss of 20 millions of dollars. When Frederick paid out this 20 millions, the receivers of course gained 20 millions, but this was offset by the 20 million dollars worth of products which they had to give to Frederick to get the 20 millions in money. On this side, therefore, there was neither gain nor loss. There was therefore a total loss of 20 millions to the taxpayers as such. The real justification for the wars, and so for the expenditure thereby incurred, like the justification of any other expenditure, is to be found in the results of that expenditure, that is, what that expenditure purchases. If Frederick's wars accomplished results for Prussia which were worth the price, then said expenditure was perfectly justified. As a matter of fact, it can hardly be doubted that the results were, on the whole, of vastly greater value than their cost in money, and so the expenditure in question was fully justified; but no justification can come from the sort of argument which Frederick himself employed.

Problem 9

Answer: "Made an increased demand for the goods and services of the people of our village."

Problem 10

It is not true even for the individual that he can get rich only by selling more than he buys and saving the surplus in the form of money or bank credit. Doubtless this is one way to get rich, a way which was much followed in earlier times; but, nowadays, a man gets rich by buying with his money the right kind of thing, that is, by buying something which is productive, which will in the future yield him a return. Further, in the case of a country, treated as a whole, there is almost nothing in the idea that the way to get rich is to accumulate money. As has been so often pointed out, the real significance to a nation of its foreign trade is that it permits more extensive cooperation and specialization. This plainly has no more direct bearing on its accumulated wealth than any other method of attaining high efficiency. The truly best method of increasing accumulated wealth for a nation, even more than for an individual, is the one pointed out above, i.e., increasing its stock or outfit of durable means of production, its roads, canals, factories, etc., etc.; and of course this should be done in the proper proportion, including a suitable amount of money.

Problem 11

If we admit that the individual man will take all the money offered him in exchange for his goods or services, this is only with the proviso

that said individual *is permitted to make the natural use of that money, i.e., to exchange it for food, clothes, or anything else which he may desire*. If it were made a part of the bargain that he must keep said money stored without expending it for other things, it is not true that he would gladly accept all offered. On the contrary, he would probably refuse any offered on this condition, since it would involve his establishing a storehouse, keeping guard over the money, etc., etc.,—and all this to no purpose whatever. The case of the community is no different. If a country can utilize the money that comes to it by buying with that money other goods, said country ought to take any amount offered and ought to be glad to do so. But this is contrary to the proviso in the case before us. That proviso is that the country shall keep within its own boundaries all the money that comes into it, not using any of it to buy goods from outside. Now this amounts to claiming that the country can advantageously utilize as money, as a part of its machinery of exchange, all the money that could be brought into it. But this is surely absurd. A country could no more utilize to advantage all the money which might come in than a family could utilize advantageously all the cook-stoves it might buy. A country can utilize to advantage all the money needed to do its money work, but no more. To keep more than enough is like buying a lot of extra cook-stoves. If money in excess of this comes in, sensible people would desire to utilize it by sending it out again to purchase things more needed.

Problem 12

This is, of course, the same fallacious idea that we have had over and over again in the problems. The fact that Americans are spending \$200,000,000 abroad does not mean that this much money is sent out either immediately or ultimately. The foreign traveler does not carry in his pocket the money he needs. Instead, he takes with him a letter of credit or some other credit instrument, which he utilizes to get cash as he may need it. Thus, his traveling abroad does not, in the first instance, affect in the slightest degree the quantity of money circulating in this country. But, further, his travel makes no difference in the long run, since the indebtedness against us created by his travel goes into the general stock of such indebtedness and is canceled by exports like any other part.

Pages 203-205

Problem 1

George Rankin's demand for the goods and services of other people, that is, his capacity in a general way to add to the total of em-

ployed persons, is fixed by this total income, not by his choosing to spend \$400 in this way. If he did not spend this money on building the dam, he would of course spend it in some other way. Even if he deposited it in the bank and did not spend it himself, it would undoubtedly be lent to someone who would spend it and would thereby create a demand for labor.

Problem 2

The notion that the amount of work to be done at any particular time is fixed, though very common, is none the less erroneous. The amount of work demanded depends on the amount of product offered in exchange for labor. Since the work of women and children would increase the amount of product, it would correspondingly increase the demand for labor to produce the things which the women and children wanted, and, because of their own production, were able to buy.

Problem 3

It is quite certain that those who have the money have unsatisfied wants, else they would not be taking the trouble to get the income. Their unsatisfied wants may be for capital goods, such as buildings, engines, machinery, etc., but they are unsatisfied wants just the same, and constitute a demand for products, and so, for the labor to produce products. If production were directed properly it would have no trouble finding a market, since it would be employed in supplying the things which the people in possession of the money really want, instead of supplying things which only those who are too poor to buy want.

Problem 4

(a) In deciding to spend and actually spending \$600 to redecorate her house Miss Cynthia would not increase the employment of laborers generally, for she is bound to spend her income in hiring men to do something or other, and in so doing would cause employment.

(b) We can be certain that everybody is now doing the very thing which Mr. Blossom thinks they ought to be doing; for they are taking the trouble to earn an income, and we can be quite sure that they would not be doing this unless they had some use for that income in buying from somebody goods or services which they could not produce for themselves.

Problem 5

Yes, the cold snap was a bonanza for Ann Arbor plumbers. The student is in danger of confusing this statement with one which declares the freeze-up to be a bonanza for producers generally, a statement which would of course be untrue.

Problem 6

There is no difference between these two cases. The man that saves \$10,000 and buys gold with it to bury in the ground creates just as great a demand for products as the one who spends a similar sum for a banquet; for the gold which he buys and buries in the ground *has to be produced* just as truly as the banquet itself.

Problem 7

Plainly not. The volume of demand is fixed by the volume of product. The fire made greatly increased demand for some products, but not for more products *in general*.

Problem 8

There are various reasons why it is to the interest of every kind of producer to see the efficiency of other kinds of producers increased; but the one which is called for at the close of this particular chapter is that the increased efficiency of *other* people increases their demand for *my goods*.

Problem 9

Same old case of *misdirected production*. Demand and supply are each coincident with product; if product is what it should be, the two cannot help being equal.

Problem 10

If King Haakon took to blacking his own boots his demand for the services of other people in some field would be just as much increased as his demand in this particular field is lessened, for of course his total demand is unchanged until his income changes, and there is no such change in the hypothesis.

Pages 215-219**Problem 1**

The author doubtless meant that keeping our fleet in our own ports would increase the demand for the goods produced by our people and so would increase the amount of employment. This overlooks the principle of reciprocity. If our fleets are using goods of foreign nations, America must produce goods of some sort to pay for these, for we may be quite sure that the foreigner will not make us a present of his goods. But the foreigner's demand for the goods which we use to pay for our supplies would increase the demand for American goods just as much as would the location of the fleet in our own port. In short, a change in our policy would not tend to increase or decrease business or employment in general, but only to shift it from some fields to others.

Problem 2

If we do not buy abroad, we cannot sell abroad. Exports and imports must be equal. If, for the sake of those home producers who are producing at a disadvantage in this country, we put import duties on certain goods, and so exclude those goods from our markets, we thereby reduce the sales of foreigners to this country, and hence reduce their power to purchase from us. But obviously this loss falls on those home producers who supply the major part of exported goods. Further, these producers are naturally and inevitably those home producers who are engaged in industries for which our country is well adapted and which, therefore, are not protected by tariff. In so far, then, as protection succeeds, it wrests the foreign market "from unprotected home producers." (There was a good deal of point in the southern contention that, under actual conditions, the protectionist legislation of 1828 and 1832 was *sectional legislation*.)

Problem 3

The things bought from Boston by Marblehead could not be paid for with money, because money was not a Marblehead *product*. Marblehead must have done its paying with fish or something which it did produce.

Problem 4

This is, of course, very silly and would hardly be indulged in even by the average American newspaper. It is, however, the exact analogue of the sort of thing that is frequently said with respect to Chinese labor. It is the usual mercantile fallacy that only those people who buy from us contribute to our industries and merit reward. Obviously, the people denounced in the supposititious quotation have been, in part, at least, responsible for the existence of the wealth produced by the Benton Harbor district, and therefore have, in the truest sense, contributed to the support of Benton Harbor industries. Further, their contribution is doubtless quite as large as the income which they have received in return. What use they make of that income is the business of no one but themselves. Still, again, probably it would not be of any immediate advantage to Benton Harbor to sell its goods to these particular persons. On the contrary, the producers of such districts soon learn that the best customers—the customers who can pay the best prices—are a good way away from home. (Local consumers always find it extremely difficult to get good products of the sort for which their district is famous.) The best markets for the choice peaches, grapes, etc., are to be found among the wealthy classes in the great cities and their suburbs.

Problem 5

(1) Exports and imports must, in the long run, be equal. If, then, opening up new markets increases our exports, it must lead to a corresponding increase of imports.

(2) Nations which do not produce gold must get it by importation. But, as gold usually comes in the form of money, it is not counted in the reported imports, and so such a country would, if other conditions did not neutralize this one, seem always to have an excess of exports. We, however, are one of the chief producers of gold, would therefore naturally export gold, and hence would not have at this point a cause tending to interfere with the prompt working of the principle of reciprocity.

Problem 6

Same as that in Problem 1 above; if we buy coal supplies abroad, our labor and capital will have employment producing the goods which we export to pay for said supplies.

Problem 7

The fact that the things which we sell to our neighbors are more necessary to them than the things which they sell to us are necessary to us is a reason why the ratio of exchange between them and us should be more favorable to us; that is, it is a reason why the advantage derived from exchange should be so divided as to give us a larger proportion than they get. It is not, however, a reason why our exports should be in excess of our imports. If the intense needs or demands of our neighbors cause a great increase in our exports, this increase in our exports must in turn cause a corresponding increase in our imports.

Problem 8

Unless foreigners in general could sell to Great Britain they could not buy goods from Great Britain, because they would not have the wherewithal to pay for the goods purchased. Consequently, if Great Britain opens her ports to other people she thereby creates for them a buying power wherewith they can purchase goods from her. Further, it should be noticed that this *selling* to Great Britain itself brings about a stimulus to *buying from* Great Britain; for it makes credit on Great Britain abundant in foreign countries, lowers the rate of exchange on Great Britain, and therefore stimulates purchases therefrom.

Problem 9

(a) No. We pay for goods with goods—for rails with cotton.

(b) If we produced the rails at home we should have to take labor and capital from some of the existing industries, say, cotton, in order

to produce the rails. We should not then have both the rails and the cotton, but only the rails.

Problem 10

This might be a reason why trade between the United States and other countries would be large, but it could not be a reason why the excess of exports over imports should be great. If the cause named brought an increase in exports, that increase in exports would in turn bring about an increase in imports.

Problem 11

(a) The real economic evil of having our neighbors shut out our goods is that it takes away the opportunity for cooperation and specialization.

(b) We surely would not better matters by shutting out their goods. Of course, if they had entirely shut out our goods, our action in shutting out theirs would make no difference, since, if we could not sell them anything, we should be equally unable to buy from them anything. But no such complete stoppage of trade is contemplated. Foreigners destroy a part of our trade by putting duties on certain goods that we have to sell. This diminishes considerably our buying power from them, and hence diminishes the extent of cooperation and specialization. If, now, we proceed to shut out some goods of theirs, we, in turn, diminish their buying power as respects ourselves, and thus still further reduce our trade, and so, the extent of our specialization and cooperation. In other words, "fair trade," as it is commonly called, is just as fallacious, doctrinally speaking, as is protection.

Problem 12

(a) No; unless he has cheated them; for in order to get an income from the people of Detroit, he has been obliged to give them an equivalent in services. There is therefore no balance of obligations on either side.

(b) No; if the son buys goods in Ann Arbor, Detroit is thereby put under obligation to the city of Ann Arbor, that is, becomes the debtor of the city of Ann Arbor. This debt must be made good by selling Detroit products either to Ann Arbor itself or to some other community which does sell to Ann Arbor. The demand for Detroit goods will in the end be just as great whether the student buys his supplies in Detroit or Ann Arbor. On the former plan, the demand will be for students' supplies; on the other, it will be a demand for the exported goods which in the end pay for the goods bought by the student in Ann Arbor.

Problem 13

(a) This is substantially the same case as the last. If the community in question buys certain goods from Chicago, it will be obliged to sell and so, to produce, other goods in order to pay for those goods which are purchased in Chicago.

(b) In this particular case there is another and extremely silly fallacy. The buying power of the butcher with respect to the grocer, that of the grocer with respect to the dry goods merchant, that of the merchant with respect to the doctor, and so on, would be increased, not by one dollar, but only by the *profits* of the sale. Thus, the butcher who receives a dollar for a piece of steak will not, because of this sale, have a dollar which he can use to buy a dollar's worth of groceries; for the major part of this money he must use to pay the stock raiser or the packer for the beef. If we suppose his rate of profit to be 12 per cent he would derive from the sale in question just 12 cents in purchasing power. That is, he can buy only 12 cents' worth of goods from the grocer. But the grocer, having received this 12 cents, cannot spend it all for dry goods, since he has to pay for the goods he has sold. Supposing his rate of profit (including pay for his own services) to be 20 per cent, he will now have 2.4 cents with which to make purchases at the dry goods store. Out of this 2.4 cents, the dry goods merchant would clear perhaps 3/10 of a cent, which he could spend on the doctor. Plainly, the amount of the original dollar which would be left by the time the butcher came around to get his tooth mended would be practically infinitesimal.

Problem 14

The effect of this condition is to swell England's imports. Of course, she is exporting something to offset this excess of imports; but then, this something is the *use* of capital, an export which does not show in the returns of the customs house. She receives her pay, however, from a larger volume of wheat, meat, cheese, butter, etc.; and these, being all items which appear in the customs house reports, her imports will show a very decided excess.

Problem 15

(a) He probably thinks that the possession of the large fund of money would enable people in the community to hire labor, start factories, etc., and so, increase the general productive power, *even though that money could not be sent out*.

(b) His expectations are quite unreasonable. Money will help us to start up industries because, and provided, we are allowed to use

it buying the real things needed—labor, raw materials, machines, engines, etc. Further, in the case of labor, it is not really the dollar which buys that labor, but the food, clothing, etc., for which the laborer expects to exchange the money. Accordingly, the very reason for wanting the money is the use we can make of it outside to buy food, tools, machinery, etc.

(c) The policy in question would make the county poorer rather than richer; for it would use up the productive capacities of the county in accumulating great quantities of something which its people had no use for, whereas these same productive capacities might have been employed in increasing the various forms of needed capital, and so, increasing the productive power of the county.

Problem 16

Undoubtedly the productive capacity of a county would be increased if a man were to move in bringing with him \$100,000 in money, *provided he were permitted to send that money out of the county to get back in exchange food, clothing, machinery, engines, etc.* There is therefore no inconsistency between our two propositions.

Problem 17

(a) The writer probably thought that the extravagance of Mrs. Gould leads to a larger demand for goods, hence more business, hence more employment for labor and capital.

(b) This is the same old fallacy. Mrs. Gould's income will of course be spent in some way. In whatever way it is spent, it will make a corresponding demand for goods, a corresponding volume of business, and a corresponding demand for labor and capital. Perhaps it is all right for her to spend the money this way; but, if so, this is because the goods and services bought with the money give an adequate return. The reason given by the editorial quoted has no force whatever. I hardly need say that the philanthropist and the economist would say that she could make a use of the money which would be far better from the standpoint of the public generally, as well as from the standpoint of the poorer classes.

(c) The additional argument given in the last sentence is simply silly. Of course the money isn't lost. Money is one of the most durable forms of capital, engaged in the business of facilitating exchanges. Whether the use of money in buying a particular kind of goods is wasteful or not cannot be tested by watching what happens to the money. The money in the case merely assists in the process of ex-

change. The things to watch are the goods bought with the money. If their destination is satisfying one's vanity and spirit of ostentation, or, even worse, paying for vicious gratifications, moralists have a right to complain that wealth is being wasted.

Problem 18

(b) See pages 211-212.

Problem 19

It is for the interest of the producer to dispose of his goods in the best market. In accord with this principle, we habitually sell to Europe, which without doubt is a far better market for most of our exports than South America. But, unless Europe can sell to us in return or to some other countries from which we wish to buy, she cannot buy from us, and so cannot continue to furnish the good market assumed. Now, Europe cannot sell to us enough to offset our sales to her, because we have relatively small need for her products. However, if she can dispose of a considerable volume of goods to South America this will answer just as well, since we want to buy extensively from South America, and so we are glad to take Europe's credits on South America to be used in paying for our purchases on the latter continent. In short, leaving the South American trade to Europe is, in some sense, a condition of our having a good export market in Europe.

Problem 20

Manifestly, Germany could pay at the most but \$300,000,000 of the indemnity in gold, except as she imported that gold from other countries; if she paid an indemnity of \$40,000,000,000, she would need to import \$39,700,000,000 of gold. But she could not import this gold without exporting an equal amount of commodities or services to pay for it.

Pages 225-226

Problem 1

(a) The comparative costs referred to in our principle as appearing in this particular case, are 10 days as compared with 5 days, and 14 days as compared with 6 days. That is, the one set of comparative costs is 10 over against 5, and the other set of comparative costs is 14 against 6. Because 10 over 5 and 14 over 6 are not equal fractions, therefore, exchange will in this case be profitable.

(b) See page 225.

(c) Country A will export iron.

Problem 2

If we suppose that in country A the costs of iron and cloth are, as before, 10 days and 5 days, while in country B they are 14 and 7 days, then exchange will not pay. For in each country one ton of iron will be worth two yards of cloth; and, so, neither country can gain by exchanging its goods, whether iron or cloth, for the goods of the other country.

Problem 3

If we assume conditions such as given in Problem 1, then the second country, B, could profit by giving country A in exchange for a ton of iron any amount of cloth smaller than 2.33 yards, since the latter is the least cost of iron in terms of cloth at home. Let us suppose, now, that the rate of exchange favors country A to substantially the highest degree possible, making a ton of iron able to buy 2.33 yards of cloth. On this hypothesis 2.33 yards of cloth cost A only 10 days' labor, since this is the cost of the ton of iron with which it buys that cloth. On the other hand, these 2.33 yards of cloth cost country B 2.33 times 6 days or 13.98 days. Hence country A gets the cloth at a cost in labor which is 3.98 days smaller than its cost in labor to the foreign country, B.

Problem 4

The reason given is not quite satisfactory, because it implies that England must be absolutely superior to us and we absolutely superior to her in order to make the trade profitable. As brought out in the text, such absolute superiority is not necessary, although it would undoubtedly produce the result. It is enough that England should be relatively superior to us in the production of ships, and that we should be relatively superior to her in the production of something else.

Problem 5

Southern California is so greatly superior to most other parts of the world in respect to the production of citrous fruits and walnuts that it would probably be more profitable to specialize in these industries even if it were greatly superior to other districts in the production of wheat.

Page 236

Problem 1

- (a) $\$.93 + \$.02\frac{1}{2} = \$.95\frac{1}{2} =$ total cost cash wheat by May.
 $-\$.95\frac{1}{2} + \$.70 = -\$.25\frac{1}{2} =$ loss per bu. on cash wheat.
 $+\$.95\frac{1}{2} - \$.70 = +\$.25\frac{1}{2} =$ gain per bu. on May wheat.

(b) No.

$$-$.95\frac{1}{2} + \$1.10 = +$.14\frac{1}{2} = \text{gain on cash wheat.}$$

$$+$.95\frac{1}{2} - \$1.10 = -$.14\frac{1}{2} = \text{loss on May wheat.}$$

(c) Carrying means bearing the burdens of ownership.

Problem 2

If there were no speculative trading, the rise in price which would naturally result from the shortage in the wheat crop would not take place until the shortage had been realized. But, of course, this could not be till a very considerable time after the crop had been harvested, for at the beginning of the postharvest period the crop is bound to be vastly in excess of the immediate demand. It follows that without speculation, even though the crop were short, the price would be very low at the beginning of the postharvest period and would rise only quite late in that period. Such a postponement in price change would diminish greatly its efficacy as a regulator, not only in respect to the *consumption* of the immediate crop, but also in respect to *production* for the future. This would be especially true in the case of crops which are put in almost a complete year before the harvest, or for which anyhow the soil is prepared at such an early date. All this is fundamentally altered when speculative trading is highly developed. In 1915 the inevitable shortage in wheat was clearly anticipated as early as June, and was manifested in a very high price. Plainly this would tend to diminish consumption and would stimulate the preparation of a much larger acreage to be devoted to the raising of wheat. Farmers would hasten to put in winter wheat during the following August or September and start the preparation of the soil for the spring wheat of the next season.

Pages 240-241

Problem 1

$$\frac{\$7000 \times 7}{1000} = \$49.$$

Problem 2

$$\frac{\$2000 \times 18}{1000} = \$36.$$

Problem 3

$$\text{No. } \$250 \times 500 - \left(\frac{\$100,000}{3} + \$10,000 \right) = \$125,000 - \$43,333.\overline{33} + \\ = \$81,666.\overline{66} + = \text{the gain from self-insurance.}$$

Page 244

He would doubtless say "the annual gold product of the United States has a *value* of ninety millions dollars."

The statement quoted violates the principle laid down with respect to both demand and supply, that every legitimate statement as to the quantity of either of these moments must contain, explicitly or implicitly, an indication of the price at which the given quantity of demand or supply would be forthcoming.

The writer might have meant that the demand for labor at a rate of wages *which he considers at all legitimate* would be less than the amount offered; or, again, that the demand for labor at a price *which the laborers insist upon getting* is almost always less than the amount offered at that price; or, perhaps, that the demand for labor at a price *which any right-minded person would approve* is almost always less than the amount offered at such price; or, again, that the demand for labor at a price *which laborers would insist upon getting* is almost always less than the amount of labor which is seeking employment at some price or other — the stock of potential labor.

Page 260

This probably needs no comment. It might be well to emphasize the point that the statement quoted *does* treat the two moments, "price," on the one hand, and "supply" or "demand," on the other, as reciprocally dependent, just as the roots and leaves of a plant are reciprocally dependent.

Page 267

Problem 1

Demand Cords	Price Dollars
1	6
2	5.75
4	5.50
7	5.25
10	5
17	4.75
25	4.50

Problem 2

Demand	Price Dollars
1	200
2	175
4	150
5	140

and so on.

Problem 3

(a) At 68 cents 66,000 ounces and only so much are demanded. We cannot tell, however, whether any part of these were brought in by the fall of price to 68 cents; the last increment may have come in at some figure higher than any in our schedule.

A fall to 67 cents would bring in an increment of 4,000 ounces; a rise to this point, however, would make no difference.

Neither a fall nor a rise to 66 cents would make any difference in the volume of demand.

A fall to 55 cents would not alter demand; but a rise to this figure would cut it down by 13,000 ounces.

A fall to 54 cents would increase demand by 13,000 ounces; a rise would cut it down by 12,000.

A fall to 53 cents would increase demand by 12,000 ounces; a rise would not change it.

A fall to 52 cents would not alter demand; a rise to that figure would cut it down 11,000 ounces.

A fall to 51 cents would increase demand by 11,000 ounces; what a rise to this figure would do we cannot tell without more data than the table supplies.

- (b) 67c—the 4,000 added at 67c.
 65c—the same.
 63c—the 8,000 added at 63c.
 59c—the 8,000 added at 62c.
 57c—the 13,000 added at that price.
 55c—the same 13,000.
- (c) 66c—the 14 thousand added at 64c.
 65c—the same.
 61c—the 7 added at 58c.
 59c—the same.
 54c—the 12 added at 53c.
- (d) 67c—67c.
 66c—same.
 63c—63c.
 60c—62c.
 56c—57c.
 52c—52c.
- (e) 65c—64c.
 60c—same.

67c—same.

63c—62c.

(f) 66c—those who came in at 67c.

53c—those who came in at 53c.

55c—those who came in at 57c.

60c—those who came in at 62c.

54c—those who came in at 54c.

(g) 66c—those who would come in at 64c.

65c—those who would come in at 64c.

61c—those who would come in at 58c.

58c—those who would come in at 57c.

56c—those who would come in at 54c.

52c—those who would come in at 51c.

Pages 276-277

Problem 1

No explanation needed.

Problem 2

Notice the "more" appearing in three cases.

Problem 3

(a) From the last line we can only say that supply will be 60 and no more if price is 51 cents. We cannot know that this supply will appear *only* if price is 51 cents; it might have come in at some earlier figure.

A rise of price to 52 cents would increase supply by 12 units; a fall to this figure would make no difference.

A rise to 53 cents would make no difference; a fall to this figure would reduce supply by 13 units.

A rise to 54 cents would increase supply by 13 units; a fall to this figure would make no difference.

Neither a rise nor a fall to 55 cents would make any difference.

A rise to 59 cents would make no change; a fall to this figure would decrease supply by 12 units.

A rise to 60 cents, increase of 12 units; a fall, decrease of 8 units.

A rise to 61 cents, increase of 8 units; a fall, no change.

A rise to 62 cents, no change; a fall, no change.

A rise to 63 cents, no change; a fall, a decrease of 15 units.

A rise to 64 cents, increase of 15; a fall, decrease of 7.

(b) 55c—the 13,000 added at 54c.

60c—the 12,000 added at 60c.

- 63c—the 8,000 added at 61c.
 58c—the 6,000 added at 58c.
 52c—the 12,000 added at 52c.
 65c—the 7,000 added at 65c.
- (c) 54c—the 9,000 which would be added at 57c.
 56c—the same.
 59c—the 12,000 which would be added at 60c.
 64c—the 7,000 which would be added at 65c.
 67c—the 13,000 which would be added at 68c.
- (d) 67c-66c; 65c-65c; 63c-61c; 62c-61c; 59c-58c; 55c-54c.
 (e) 66c-68c; 63c-64c; 61c-64c; 59c-60c; 55c-57c; 52c-54c.
 (f) 67c-66c sellers; 64c-64c sellers; 63c-61c sellers; 59c-58c sellers; 56c-54c sellers; 54c-54c sellers.
 (g) 66c-68c sellers; 61c-64c sellers; 59c-60c sellers; 58c-60c sellers; 55c-57c sellers; 52c-54c sellers.

Problem 4

The marginal producer is necessarily the one who will first drop out if prices fall, since he is one who brings in the *marginal producers* ment of supply. But the quotation implies that the particular producers commented upon *would not drop out however much price should fall*: they are "taking losses," slowly passing into bankruptcy. Consequently, they cannot be marginal producers. See page 569.

Problem 5

To say that Mr. A may be producing the marginal increment is to say that he may be that producer who would be the first one to withdraw if price should fall. This would be possible if he insisted on getting for himself a clear gain of 6 cents on each unit of output, while Mr. D demanded only 2 cents. In that case, A's supply price would be 12 plus 6 cents or 18 cents, while B's supply price would be 15 plus 2 cents, or 17 cents. Under those conditions, a fall in price from 18 cents to 17 cents would cause A to withdraw from the field but would not cause B to do so—a result which would prove A to be the producer of the marginal increment.

Problem 6

The attitude of laborers determines *supply* prices only; but the supply price which hinders price from going down is the *marginal* one; finally, the marginal supply price is that supply price which is the *highest*, not the lowest, of all the actual supply prices.

Problem 1

- (a) It is inconsistent with the law of single price.
- (b) On account of the excitement, noise, and crowding, the market did not really constitute a single market in the sense of the principle—it was really broken up into many markets.

Problem 2

(a) If physicians could get rid of the law of single price, they could get from each patient what the service was worth to him instead of what it was worth to the marginal buyer, and so could keep to themselves the whole consumer's surplus.

(b) (1) The services of each physician are in a degree *sui generis*. The patient wants him rather than anyone else.

(2) The conditions are such that patients or their relatives *dislike to bargain in advance*. Hence, in the matter of price, they are largely at the mercy of the physician.

(3) The services of a physician being non-transferable, those persons who get such services at a low price cannot play the rôle of *middlemen* and sell them to others—a process which in many other cases might defeat the efforts of any monopolist to override the law of single price.

Problem 3

In the first blank, insert the word "excessive"; in the second, the word "fall."

Problem 4

(1) As a result, price rose; (2) this made profitable the cultivation of inferior lands where cost was higher, and so a new supply, etc.

Problem 5

Perhaps the easiest way to show the absurdity of this statement is to point out that if it were true, price could never rise at all.

More thoroughly treated, the trouble with this reasoning is that it confuses changes in the demand *schedule* with those differences in demand consequent on differences in price *which belong to the same schedule*. The increase which appears in the first sentence would mean an increase in the demand *schedule*, that is, an increase all along the line, anyhow an increase at some figure or figures higher than the old market price. The cutting down of demand as price advances which takes place *within* every schedule is an essential feature of every schedule, involving no true change in that schedule. Now, unless the new schedule had showed such an advance that demand at some price higher than the old market price was great enough to keep market price

at that higher figure, price would not have risen at all. But if, in the new schedule, demand was large enough to fulfil this condition, it could not have been small enough to let price drop back to its old place. A thing cannot both be and not be at the same time. The truth which might be suggested by the second sentence is that price could not rise as high as we might expect from a mere comparison of the new demand at the old market price with the old demand at the same market price. As price rises, demand falls, *in the same schedule*; and so, an equilibrating price is reached sooner than we might naturally expect.

Problem 6

First blank, *increased*; second blank, *fell*; third, *increase*; fourth, *increased*.

Pages 296-297

Problem 1

Buyers do not bid prices down, though of course they would prefer to have them low; sellers do not bid prices up, though of course they would prefer to have them high.

The truth of the first half of the statement is proved by the fact that the maintenance of *both* the *lower* limits of price *depends* immediately *on the action of buyers*: it is the *buyers* who must not permit price to go below the marginal supply price, nor down to the first extra-marginal demand price. The truth of the second half of the statement is proved by the fact that the maintenance of *both* of the *upper* limits of price *depends* immediately *on the action of sellers*: it is the *sellers* who must not permit price to go above the marginal demand price nor up to the first extra-marginal supply price.

Problem 2

It is the attitude of sellers which makes it necessary for buyers not to permit price to go below the marginal supply price; it is the attitude of buyers which makes it necessary for sellers not to permit price to go above the marginal demand price.

Problem 3

The simplest way, perhaps, is to make demand 120,000 ounces at 54 cents, 53 cents, and 52 cents; and to make supply 130,000 at 58 cents and 57 cents.

Problem 4

(1) The demand at a price above zero must be as great as possible supply at that price, else the marginal buyer could not afford to bid price up to that point, since his valuation is no greater than zero.

(2) The demand at zero price must be greater than possible supply at that price, else marginal and intra-marginal buyers would not need to bid price above that point in order to exclude *extra-marginal* buyers.

Problem 5

This seems to imply that the price would go up because the *extra-marginal* buyers would offer the higher price. Obviously this is impossible, since, as *extra-marginal* buyers, their coming in at all was conditioned on the presence of the lower price. Their competition would drive price up only in the sense that their potential competition, if price should go down, would drive the *marginal* or *intra-marginal* buyers to offer the higher price.

Problem 6

This overlooks the fact that a limit is set by the importance of labor services to the first *extra-marginal* employer. This is a very common and very pernicious fallacy. Mill emphasized it years ago by pointing out that wages are kept up by the competition of employers just as they are kept down by the competition of laborers.

Problem 7

See pages 295-296. Doubtless all demands and all supplies share in the process of price determination; but the influence of all come to a focus in the marginal and first *extra-marginal* ones.

Page 310

Problem 1

The word "normal" as used by the economist in connection with price does not connote that "which usually prevails." Doubtless we often use the term normal in this sense. Thus, when we speak of the normal condition of things as contrasted with that prevailing during the years of 1914 to 1920, we mean a condition which is *usual, present in ordinary times*. But the word is not so used in the phrase "normal price." There it means, as explicitly stated, a price which the principal forces operating throughout a given period tend to establish. Instead of being identical with the *usual* price, it rarely even coincides with that price.

Problem 2

This obviously shows a failure to understand what is meant by normal price. It is the price which is tending to prevail throughout a given period because of the influence of forces continuing through that period. The prices which were constantly changing were of course market, not normal, prices. In fact, it would be foolish to attempt to work out in any serious way normal prices for such a period.

Problem 3

Such limits are furnished by the marginal and first extra-marginal demand prices. But, in turn, these demand prices are ultimately fixed by marginal and first extra-marginal utilities or significances. Hence the proposition laid down.

Pages 319-320

Problem 1

No. This is all a matter of standpoint. From that of the entrepreneur, they are a cost; from that of the laborer, they are a remuneration. The former is of course the standpoint which interests us in our present connection.

Problem 2

Very likely not. First, remember that the marginal unit in supply is not necessarily the one involving the greatest absolute disutility. The marginal unit is in all cases the one the presence of which is conditioned on the presence of the marginal price. This is a matter not so much of the absolute disutility of the sacrifice as of the supplier's *estimate* of that sacrifice. Secondly, remember that, generally speaking, the supply price of any commodity is determined over the whole field of production for that commodity, not in each particular factory.

Problem 3

This is perhaps sufficiently commented upon on pages 317-318. Building-site rent is usually an opportunity cost, because such sites are wanted for many purposes and it is usually that fact which compels tenants to pay rent for the privilege of using them for their particular purpose. If, instead, this compulsion is due to the fact that other tenants wanting them for the *same* purpose come on the market, then their rent is not a cost.

Problem 4

It all turns on whether providing for the pay-roll involves keeping a corresponding amount of money, that is, \$600,000, invested all the time. If this whole amount is provided out of current receipts, then, of course, it is not reasonable to ask that profits should be earned upon it. As a matter of fact the meeting of this pay-roll of \$50,000 a month will probably require a permanent investment of some sum of money, though by no means \$600,000, nor even \$50,000. Very likely the company would go to the bank some time before pay day and borrow at least a portion of the \$50,000, which sum they might pay up in two or three months. But, however this might be, the whole matter turns on *how much is on an*

average permanently invested in order to meet the need in question. Only on that much is it reasonable that profits should be earned.

Pages 330-331

Problem 1

Answer: \$45. It could not be \$50, since at that price only 7 are wanted while 12 are for sale, and the persons who would fail to sell the five extra ones would lower the price in order to insure disposing of their wares. On the other hand, the price could not be \$40, since at that figure the demand would be for 18 while supply is only 12, and the desire of buyers to get the extra 6 units would lead them to raise the price to the former figure.

Problem 2

(a) Answer: \$1.20. It could not be \$1.25, since at this figure the amount wanted is 200 millions less than the output, and so, the desire of sellers to get a market would induce them to bid price down. On the other hand, the price could not be \$1.15, since at this figure demand is 200 millions in excess of the supply, and, so, the desire of buyers who are willing to give \$1.20 to insure getting their 2,000 millions will induce them to bid up the price to this figure and thus exclude those who are willing to buy only at \$1.15.

(b) Answer: Marginal significance or utility.

(c) Answer: \$1.25. The reasoning is the same as under (a).

(d) Answer: \$1.30. Reasoning as before.

(e) Answer: \$1.10.

Problem 3

(a) The plague had greatly reduced the supply of labor—according to some authorities by one-third. For practical purposes we simply assume that the whole possible supply would be turned into actual supply, that is, we should have here a fixed-supply supply schedule. The price of labor, therefore, would turn solely on the demand schedule. Supposing that the demand schedule remained unchanged, supply and demand would come to equality, and so establish a price, only when the price of labor had risen considerably above the former level. Rogers estimated that it actually rose 100%.

(b) Since the supply of labor is much smaller than before, while the schedule of significances or utilities is the same, the significance or utility of the least important portion of the labor supply, that is, its marginal significance or utility, is bound to be much greater than before. But assuming that for practical purposes this labor is a constant-supply

good, price must tend to be such as will express the marginal significance or utility of said labor. Hence price is bound to rise to a higher figure.

(c) This method of expression is very faulty, though common enough even with educated men who are untrained in economics. The evident fact is that demand is unchanged. It is supply which has been altered. Doubtless the phrase "for the laborers who were left" relieves the fault somewhat; but such method of expression is after all too inexact. The real point is that the falling off of supply has made a different increment of demand the marginal one, hence has changed the marginal utility and significance, so has changed the marginal demand price, and therefore the market price.

Pages 335-336

Problem 1

Answer: The principle just given. If cement could be put on the market in unlimited amounts at a cost of \$1.75 per barrel, it could not, in the long run, sell much above \$1.75.

Problem 2

(a) After the chair-making industry had already passed into the stage where the cost of production was 30 cents, it might still easily be true that not a few chairs in the stock of dealers had cost \$1 each. But, so long as the present cost was only 30 cents, the price would, of course, be only 30 cents. The fact that particular chairs had had a higher cost would have no influence whatever upon their market price at the present time. Librarian Davis often told of a rare, old store-keeper in a little Maine village who made a practice of refusing to sell that part of his stock of any commodity which had cost more than the present market price at the same price as he sold his new stock. As a natural consequence, his garret and cellar were full of stock which he could not dispose of at all.

(b) Not at all. The principle in question contains the condition "the continued production of which is demanded," as also the condition, always implied, that other circumstances remain unchanged. So long as these conditions are fulfilled, the price of a commodity tends to equal its cost of production—not because that *was* its cost, but because *it is the cost which would be necessary to replace the commodity*.

Problem 3

Price rose to \$1.50 per gallon; because the cost of producing whisky was in effect raised to this point, and so, under the working of the principle given on page 335, price was raised to this point. (The dis-

tiller could not put his product on the market without incurring this expense for the tax just as he incurred other expenses for grain, labor, etc.)

Problem 4

(a) The author means to affirm that marginal utility alone fixes price. If, when cost of production falls, marginal utility does not also fall, price will not fall. (Note carefully the last three lines of the quotation.)

(b) The most adequate way of showing that, in the case before us, price would fall to cost of production even though marginal utility remained much higher, is to remind ourselves that the only demand price, and so the only utility, which can set a *lower* limit to price is the first extra-marginal one. This is clearly brought out in the discussion on page 290. The marginal demand price may hinder actual price from going higher, but not from going lower. The necessity that buyers at the demand price should bid price up to their figure in order to exclude other buyers, arises only provided there are extra-marginal buyers at this same price or at one just below this one. But, in the case before us, neither of these conditions is fulfilled. By hypothesis, producers can supply at the new lower cost of production far more product than is wanted at *any* price—this is the very ground of the author's contention that price would not fall in this case. In other words, the first extra-marginal demand price or utility is zero. Price, therefore, could fall to zero and still there would be no competitors against whom buyers at the marginal demand price would be obliged to bid. Demand prices, therefore, have here no part in holding actual price *up* to the marginal demand price or the utility. In consequence, the lower limit of price is in this case fixed by marginal cost solely. Buyers must bid price up to cost in order to retain supply; but they do not need to bid it any higher than this.

A simpler argument than the above will very likely be presented by the students, and will fairly meet the demands of the case. It would run something like the following: If, while cost falls 50 per cent, price remains unchanged, producers will be getting an excessive profit, and the desire of each one to increase his share of this profit will lead him to underbid rivals. This process cannot cease till price is as low as cost. This will be true, even if there are no lower levels of demand to take up the commodity at a marginal utility as low as the new price. In such case, even the marginal unit of supply will yield a large consumer's surplus.

Problem 5

The \$30 is certain to be shifted to the tenant in the shape of a higher rent, because the house, being a producible economic good, has its value and the value of its uses fixed by cost, of which cost the tax is a part just as much as the stone, lumber, labor, etc., necessary to make the house.

The \$12 will not be shifted to the tenant, because land is not a producible but a fixed-supply good, the price of which is determined by its marginal significance or utility—an element which is not altered by the imposition of this tax. Taken in another way, the rent of the land is bound to be all its use is worth whether there is a tax on it or not. If a tax is put on, this does not make the use of the land worth any more, and so cannot raise its price; it simply cuts down the landlord's income. An objector will sometimes point out that real estate investors would not put up with a return on that part of their capital invested in land smaller than the return received from the capital invested in the house. Surely not. But, in the case of land, the establishing of the proper ratio between the capital invested and the income received will be brought about by a *lowering* of the *value* of said land, while, in the case of the house, it will be brought about by a *raising* of the *income* from the house.

Pages 340-341

Problem 1

(a) No need for comment.

(b) Answer: 59 cents. Sellers would keep the price from going up to 60 cents, both to retain the 59 cents demand and to exclude the 60 cents supply; buyers would keep the price from going down to 58 cents, both to retain the 59 cents supply and to exclude the 58 cents demand.

(c) Answer: 60 cents. Proof as before.

(d) Both marginal significance and marginal cost.

Problem 2

Even if we are content to accept marginal cost as an adequate expression of all the forces at work in price determination, we anyhow must recognize that marginal cost itself is not fixed but variable. It will be smaller, if demand, and so output falls off; it will be larger, if demand, and so output increases. Accordingly, we may say that, *as far as the general principle is concerned*, there is no reason why the price of silver should not have risen to \$1.29, or to any other figure, if the proposed action had been taken by the United States government. Doubtless, however, no such result would in fact have followed, for the reason

that the increase in demand resulting from the proposed action would not have been anything like large enough to bring about the results indicated. But this point is not involved in the principle as a mere principle.

Problem 3

- (a) Answer: 59 cents. The usual proof.
- (b) Same as under (a).
- (c) Same as before.
- (d) While demand at 59 cents ranges between 175 million and 500 million, price is determined by cost of production simply, marginal significance or utility not playing a vital rôle.

Problem 4

(a) Fill the blank with these words: "would become effective, the new output would be used to furnish lower and lower utilities, and thus the new marginal utility would adjust itself to the price."

(b) In the original quotation Seligman says marginal cost will do so and so, "if the marginal efficiency or value of silver should rise," implying that a new marginal efficiency of silver could be fixed without regard to marginal cost—and this is plainly necessary to his argument. But, surely, marginal utility could not be fixed independently of output, and output could not be fixed independently of the relation of price to cost.

On the other hand, the second quotation implies that marginal cost would be fixed independently of marginal utility. But this is, of course, quite impossible. Marginal cost could not be fixed independently of the price, nor this independently of marginal demand price or utility.

Taking the case of the first hypothesis, it is doubtless true that the first effect of the new condition would be a rise in price brought about by a rise in the marginal utility of the present output. Again, the second effect would be as indicated, that is, would be to cause inferior opportunities for getting out silver to be worked. But here the argument stumbles. The working of the inferior opportunities does not merely tend to adjust marginal cost to price and marginal utility. Because it increases output, it also *hinders the new price from rising to the point it would have reached under the influence of the new demand schedule alone*. In short, the new price of Seligman was only a provisional one; the definite one established by the new conditions would necessarily be one in the determination of which marginal cost as well as marginal utility had participated.

Analogous reasoning would show that the new definitive price under

the substitute hypothesis would necessarily be one in the determination of which marginal utility as well as marginal cost had participated.

To illustrate these propositions, the schedule of Problems 1 and 3 may be used. Starting with the original output and demand schedule, suppose a sudden change to take place in the demand schedule from its original form to that of Problem 3 (c), by which the marginal utility of the 190 million which are being produced under the original demand and supply schedule becomes 65 cents. Doubtless, price would tend to advance immediately to 65 cents. Whereupon, according to Seligman, the more expensive grades of silver would be marketed and marginal cost would advance to 65 cents, thus adjusting itself to price. But surely nothing of the sort would happen. While the immediate price would become 65 cents and so marginal utility would immediately coincide with price, in a very short time the interaction of the output and demand schedules would establish a price of 62 cents, not 65 cents, which price would express the new marginal utility and equal the new marginal cost of the amount marketed, namely 205 millions.

Again, starting as before, suppose the conditions of production to be so changed that all producers, including those who are getting out silver at 59 cents, find their cost declining by 6 cents per ounce. Suppose, further (what is not very likely), that said producers promptly bid down the price to the new marginal cost of 53 cents. According to our substitute quotation, the latent layers of demand at lower prices would at once become effective; and a new marginal utility of 53 cents would promptly be established. That is, marginal utility would adjust itself to a price determined by cost. But surely nothing of the sort would happen. As soon as the new output schedule and the old demand schedule had had time to come to an equilibrium, a price of 56 cents, not 53 cents, would be established—a price which would at once express the marginal utility and equal the marginal cost of the 205 million ounces put on the market.

Page 346

Problem 1

Veal, hides.

Problem 2

See the discussions of Taussig and Pigou in the *Quarterly Journal of Economics*, February, May, August, of 1913. Taussig takes the affirmative position, building on these two facts: (1) a large part of the costs are *common costs*, and (2) these two different cases of transportation have *different demand schedules*. Pigou takes the negative position

principally for these reasons: (1) By-products must be *necessary* resultants from the productive process and not *merely possible* ones. (2) We should never treat different uses of the same product as different products. Transport, whether it be the transport of dry goods or that of coal, is one homogeneous product. (3) Where we have a case of real joint-cost products, the principle laid down above will apply even if we have perfect freedom of competition. But, in the case of railroad transportation, the discrimination involved could not work out unless there were monopoly. I am rather inclined to think that Pigou has the better of the argument.

Problem 3

The increased use of cotton-seed oil naturally raises the total value return from the cotton crop. But this total cannot in the long run be greater than the cost. The price of cotton itself must therefore fall to bring about the necessary equality of total return and total cost.

Pages 350-351

Problem 1

Answer: \$771.43. Since you can get 7 per cent per annum upon whatever capital you have to invest, and you can get on each share of this stock \$54 per annum, the price which you should be willing to give for a share would be as much as .07 is contained in \$54, which is \$771.43.

Problem 2

Answer: \$528.57.

Problem 3

Answer: \$105.26. If the government bond is yielding 2 per cent interest, then that means a total yield of \$2 per annum. But, if the average return on securities of this grade is only 1.9 per cent, then you ought to be willing to give for the bond which yields \$2 as much as .019 is contained in \$2, which equals \$105.26.

Problem 4

Answer: \$30,909.09.

Problem 5

(a) Since by hypothesis the state takes in the shape of a tax 93 per cent, this would leave for the owner only 7 per cent of \$51,000, which is \$3,570. This sum capitalized at 5 per cent will give \$71,400, which is the natural value of the property.

(b) If the rate of taxation were raised to 100 per cent, the income would, of course, be reduced to zero. But a zero income capitalized at

5 per cent will give a zero value for the income-bearer, i.e., the property would become worthless.

Problem 6

You would expect the price of such a bond to fall greatly. By hypothesis, it yields only 2 per cent, that is, \$2 on \$100; and, since the rate of interest is exceptionally high, the quotient resulting from dividing \$2 by the current rate of interest, i.e., the value of the bond, will be exceptionally small.

Problem 7

In the first case, \$3,750. In the second, \$5,000. In the third, \$6,000.

Problem 8

This is not a reasonable problem. The automobile is a producible good, and hence its income cannot be fixed independently of its cost. If at any particular time the income is too great in view of what it costs to supply automobiles, that income will fall until it constitutes a reasonable return at the ordinary rate of profit on said cost. That is, in this case of producible income-bearers, the price of the income-bearer itself is first determined, and then the income adjusts itself to this price.

Problem 9

Answer: \$544. Since the auto costs \$1,200 and lasts only three years, it must earn \$400 a year to pay for itself. Since it is to earn in addition 6 per cent interest and 6 per cent profits, a total of 12 per cent on the \$1,200, i.e., \$144, must be added to the \$400, making a grand total of \$544. (Obviously this solution is not exact, since it ignores the fact that the value of the auto has diminished at the end of the first year and still more at the end of the second year. However, this will do for our purposes.)

Problem 10

Interpreted to mean that, in view of one or more outside demands for the site at a rent justifying a price of \$22,000, any particular business can afford to use that site only on condition that it yields a surplus of \$1,320, the problem is legitimate. Interpreted as meaning that, in view of the fact that the site is antecedently worth \$22,000, businesses *in general* must yield a surplus of \$1,320 if the site is to be used at all, it is illegitimate.

Page 354

Problem 1

- (a) \$115.
- (b) \$115.
- (c) \$75 and \$100.
- (d) \$50 and \$100.

Problem 2

The reason which was believed to have determined managers of the trust was that if the price was unduly raised, it would invite outside producers into the industry and so increase competition. The purpose of this problem is to call attention to the significant fact that trusts of this sort are *capitalistic* monopolies—monopolies which can maintain their exclusive powers only by refraining from keeping prices greatly above ordinary cost.

Pages 354-356

Problem 1

The price would be \$45. It could not be above this, for at any higher price sellers would not be able to dispose of the whole eleven specimens and hence would bring down the price to \$45 where all would be taken. On the other hand, the price could not be under \$45, since even at this figure more are demanded than supplied and the competition of the persons wishing to get them at this price, as against possible buyers at lower figures, would hold the price up to this figure.

Problem 2

(a) A tax of \$5 would make no difference in the price. A tax influences prices only because it adds to the cost of production and so raises the marginal supply price of a certain output. Even then it has no influence unless the case is such that the marginal supply price, rather than the first extra-marginal demand price, constitutes the lower limit of price. But, in the case before us, this is not true. The objects in question have today no cost of production *other than the tax*. Their supply price, therefore, is only \$5. On the other hand, their first extra-marginal demand price is \$45. It follows that the first extra-marginal demand price, rather than the supply price, sets the lower limit of actual price; and so the tax, which affects only the supply price, has no part in the matter.

(b) The burden of this tax in the end, as at the beginning, would be borne by the sellers of the eleven specimens.

Problem 3

(1) The reason for preferring cost of reproduction to cost of production is that the word production possibly implies to some minds that the value of the thing is determined by the cost of producing that very thing itself—that the reason why its value is so and so is that its cost of production *has been* so and so. So understood, the statement would be untrue. The reason why cost of production enforces itself upon values

is that we cannot get the article in question replaced unless *in future* we cover its cost of production. This possible misunderstanding is fully guarded against by saying cost of *reproduction*, instead of cost of production.

(2) An assumption implied in the very idea of normal price is that the conditions are constant; and in fact this is implied in the statement of any natural law. A has a certain relation to B, provided the conditions in any case to which the principle is applied are the same as those for which the principle was laid down. But if, in the case before us, we assume the conditions to be unchanging, then cost of production is the same thing as cost of reproduction; and so it is unnecessary to change to the latter phrase.

Problem 4

This statement overlooks the fact that the livery business is one which is open to competition. We do not have here a case of fixed-supply income-bearers. Livery plants can be produced—must, in fact, be produced. Their value, then, is not determined by their income. If a tax causes that income to fall off until returns are less than in some other lines of business, these plants will not be renewed, supply will presently become inadequate, and prices will rise. That is, a tax of this sort is shifted *forward upon consumers*.

Problem 5

(a) The words "which correspond to the values to the buyers of the thing sold" are useless as a definition of reasonable price; for, of course, every article sold is worth to buyers all that they give for it, else they would not pay that much. In the case of monopoly goods, just as truly as in the case of goods subject to free competition, values can never be greater than marginal utility, marginal significance. One could not conceive a kind of goods having a price greater than the one which would express its value to buyers.

(b) The price commonly considered a reasonable one is the price which equals cost of production.

(c) No. In most cases of monopoly goods, prices are undoubtedly higher than cost of production.

(d) In the case of capitalistic monopolies where it is necessary to keep the price somewhere near the ordinary cost of production in order to shut out possible rival producers, this statement can be affirmed with a fair degree of accuracy.

Problem 6

The doctrine implied is that, so long as there is freedom of competition in any field, the profits earned in that field will not be unreasonable—assuming that some profits are reasonable and, in particular, that the profits commonly obtained in different lines of business at the given time and place are reasonable. This particular doctrine will come up for fuller discussion in a later chapter.

Problem 7

The cultivation of inferior soils could not bring back the price of wheat to its old place, since this cultivation of the inferior soil is conditioned upon the higher price. If, therefore, the price falls back, this cultivation of the inferior soils will cease, the demand will again be unsatisfied, and so prices will rise. What he should have said is this: The higher price leads to the cultivation of the inferior soil, which increases the supply of wheat so as to satisfy the demand, and thus hinders the price of wheat from rising to any higher figure. (Similar to Problem 5, page 288.)

Problem 8

No, this price is not reasonable. It is obtained by dividing the net income of \$700 by .08; but this is treating the matter as if it were a case of special privilege or monopoly. There is nothing in the hypothesis to imply that competition is excluded, and doubtless, with the evident profitableness of this business, that competition will soon become effective. As the conditions of the problem state, the investment is only \$500, and since this would only warrant an income of \$40 clear, competition would soon bring down the clear income of the business to this figure. The only reason for giving any more than that would be that the present incumbent has an opportunity which he personally has built up—a fact which makes him a more successful producer here than any new man could hope to become for a considerable time. This, however, is covered by saying that the good-will of the business is worth \$500. A reasonable price then would be \$500 plus \$500, or \$1,000. The size of the pay-roll has no bearing on the case. In addition to good-will, the only question is how much capital is really invested in the business, and, by hypothesis, there is only \$500, including the bank account necessary to keep the pay-roll adequately provided for.

Page 386

Problem 1

The principal reason why the prices of different commodities cannot be determined independently of one another is the fact that they are

interchangeable, are capable of reciprocal substitution: if we lose one, we can replace it with another. In such case, the one first chosen cannot get a price higher than the possible substitute. Accordingly, our task is to show that, in special ways, *labor units are interchangeable*. First, between miners of all sorts, coal miners, iron miners, copper miners, there is always considerable freedom of movement, and so they are interchangeable. The younger men, especially the unmarried ones, watch out for better opportunities and do not hesitate to make the changes necessary to improve such opportunities. Again, there is much freedom of movement between miners of all kinds as a group and laborers in *other fields requiring similar capacities of body and mind*. Thus, during the years 1918 and 1919 there was a notable movement of miners from one copper district of Michigan to the city of Detroit to enter into the employment of the manufacturers of automobiles and automobile parts. Finally, the *new* labor units, the ones coming from the new generation, are in large measure free to choose the field into which they will go and so are in a still higher degree interchangeable, capable of reciprocal substitution; they can choose mining or something else. The wages of miners, then, cannot be determined independently of those paid in other fields.

Problem 2

Practically everyone derives his income—and upon incomes the burden of taxation must of course fall—from the price of some service or services supplied by himself or his property. If, now, a tax be imposed in such a way as to fall on income from one special employment of a particular type of service or from that type of service in general, at once the bearers of such a tax will set about trying to recoup themselves by raising the price of that type of service in the special employment or over the field as a whole. And, since under the principle before us all prices are interdependent and must form a coherent self-consistent system of prices, the efforts of these bearers of the tax are likely to prove successful, though time will be needed. For, unless they are successful, their type of services will be transferred to other fields or supplied in smaller amounts; and this process must go on until a price system which distributes the tax burden in the way consistent with the totality of conditions is effected. Finally, this would mean that the burden would be distributed in the same proportion for a given volume of revenue wherever it was collected at the outset. For, though the burden of different volumes of revenue would have to be distributed differently over a given community, the same volume could be dis-

tributed only in one way if said system is to be consistent with the totality of conditions present.

The above is the general argument on which the doctrine above defended is based. Obviously, however, processes like these must take a long period to work themselves out, and, in the meanwhile, many changes might take place which would hinder the process of readjustment being satisfactorily effected. In short, authorities on finance do not consider the principle defended an adequate reason for indifference as to where the tax is first laid.

Problem 3

While a tariff checks the competition of the producers of other countries, it offers no obstacle to the competition of producers in our own country. Capital would surely flow into a protected industry until profits in that industry had been brought to a common level with those of other industries.

The second statement is substantially correct. As just noted, competition would inevitably eliminate any special profit to the protected industry, unless those profits had their origin in some condition other than the tariff, e.g., consolidation into a trust. The real burden would consist of whatever disadvantages flowed from the fact that we were not using our productive powers in the fields where our efficiency was highest. In some measure this would injure every member of the community. But the chief burden would fall on the consumers of the product of the protected industry, since a higher price for that product would be the principal immediate consequence of the tariff.

Page 388

The former part is, perhaps, too strongly stated. The price may be fixed by cost at some point below the marginal significance of the stock of the single commodity. But, in so far as price is determined by significance or utility at all within the field of a single commodity, it is marginal significance or utility, not significance or utility in the particular case, which decides the matter.

The real, true, ultimate marginal significance is that of the primary factors—those which constitute the source of all products. The laws of cost compel all specific significances, as well as all lesser marginal significances (those of particular classes of products) to yield to the domination of the true, final marginal significance.

Page 391

If we ignore the influence of disutility in limiting production, the causation of value in products must come from the side of *demand*,

which means ultimately *utility*, capacity to satisfy wants. But obviously the utility of a cost-good or factor in production must be a *derivative* utility, a utility of *something produced from itself*, since it is not put directly to the satisfying of wants but only indirectly, that is, in the person of its products. Looked at broadly then, the process of causation must be from products back to cost-goods, disutility being ignored. That is, between products *as a whole* and cost-goods *as a whole* causation moves from the latter to the former. Now, however, if we are confining our attention to an individual product, the case is quite different. Generally speaking, no single product can play so large a part in the utilization of given cost-goods that changes in the amount of that product produced can materially affect the value or price of the cost-goods involved. The producer of such product finds the prices of his cost-goods determined, approximately anyhow, in advance. He has to get a certain price for his product because it costs so and so much. Causation in the *individual* case, therefore, is from cost-goods to product.

Page 396

Problem 1

Answer: Greenbacks.

Problem 2

Answer: Bank notes.

Problem 3

The new condition named would not have changed the answer to our problem. It is true that in this case two kinds of money fulfil the condition of being at par, but only one fulfils the condition of *having its value determined independently of other moneys*. This one was of course the greenback; for the national bank note was held to its value merely by its redeemability in greenbacks and so was dependent for its value upon those greenbacks.

Problem 4

Bank credit or "deposit currency," so-called.

Pages 399-400

Problem 1

(a) At the date named the United States overrated silver; for it treated silver as if it took only 15 grains of that metal to purchase one grain of gold, whereas, in reality it took more than this, i.e., 15.8 grains of silver to purchase one of gold.

(b) Silver, being overrated, must have become standard money.

Problem 2

At the date named France also overrated silver; for it treated silver as if it took only 15.5 grains of silver to buy one of gold, while in reality it took more than this, namely, 15.8 grains of silver to buy one of gold. So, also, silver, being the overrated money, must have been standard money.

Problem 3

During the period named greenbacks were not redeemable in gold, consequently their value fell below that of gold. But, having become the cheapest money, they also became the standard money under the working of the principle.

Problem 4

Gold coin must have been standard money. By treating the gold guinea as worth 21 silver shillings, when in reality it was worth only $20\frac{1}{2}$, the mint overrated said gold money. But the overrated money always establishes itself as the standard money; hence, gold became the standard money.

Problem 5

In the panic weeks of 1837, bank notes were the standard money. A general suspension of specie payment had driven gold out of circulation, and had made bank notes practically a legal tender. Being also the cheapest of valid tenders, they became standard money.

Page 402

Problem 1

The system described tended to establish 12.9 grains of gold, nine-tenths fine, as the ultimate money standard of the Philippines; for it tended to make two pesos worth one dollar, that is, to make one peso worth 50 cents, and the value of 50 cents is fixed by one-half of 25.8 grains of gold, or 12.9 grains.

Problem 2

Under these conditions the ultimate money standard of Great Britain necessarily becomes 113 grains of pure gold; for, under these conditions, it is insured that the value of the gold coins shall be kept equal to the value of the bullion in them, that is, equal to the value of 113 grains of gold. The reasons are plain. So long as there is free coinage, the coins can never rise in value above the bullion in them. On the other hand, so long as there is free melting of coin, the bullion cannot rise above the value of the coin.

Problem 3

The ultimate standard of the United States in 1830 must have been 416 grains of standard silver. First, silver coin must have been the standard money, since it was overrated according to the mint ratio then in force.

Secondly, since silver money was freely coined (substantially free melting may always be assumed), the bullion contained in said coin must have been the real ultimate standard.

Problem 4

The silver bullion contained in the French coin of one franc must have been the ultimate standard in France. First, under the ratio chosen, silver coin was overrated and therefore must have been standard money. Secondly, since their system was like ours, both silver and gold were freely coined, and so the silver coin must have had the same value as the bullion in it, that is, the bullion must have been the ultimate standard.

Page 403**Problem 1**

The ultimate standard of the United States between 1862 and 1879 must have been greenbacks. That these were the standard money or the immediate standard has been already brought out. But they must also have been the ultimate standard, since they were not kept equal in value to any other particular object.

Problem 2

The ultimate standard of the United States during the panic of 1837 was the bank note. As already seen in Problem 5, page 400, these bank notes were made standard money by the general suspension of specie payments. But, since they were not kept equal in value to anything outside of themselves, they must as well have been the ultimate standard.

Problem 3

On the hypothesis given, the ultimate standard for India must have been substantially $6 \frac{1}{6}$ grains of gold, $11/12$ fine. For on that hypothesis standard money, silver rupees, was kept equal in value to $\frac{123.27}{20}$, or substantially $6 \frac{1}{6}$ plus grains of gold.

Pages 411-412**Problem 1**

The silver coin naturally went out of circulation.

Problem 2

The device employed by the Treasury was to issue the notes in the form of compound-interest-bearing notes, payable in three years, the interest also payable at the date of maturity but to be compounded every six months. As a result of these provisions, the notes steadily increased in value, and consequently were too good to pay out unless a premium was received. But, as we have already seen, premium moneys do not usually circulate, hence the note tended to go out and stay out of circulation.

Problem 3

Under the conditions named, the gold naturally went out of circulation.

Problem 4

The first provision would tend to secure contractility; for it would make the getting of bank notes redeemed comparatively easy for people who wished this done. But getting the notes redeemed by the issuing bank would put them out of circulation. Device (b) would be still more potent, since it would increase the motives of banks receiving the notes of any other bank to send these notes home for redemption, that is, to insure their temporary retirement from circulation. Device (c) would work in the same direction, since the inability of a bank to use the notes of another bank as a part of its reserve would greatly increase its motive for returning these notes to the issuer. This especially applies to the state banks which do not themselves have the power of issuing notes, which, consequently, have no particular object in keeping the notes in circulation instead of sending them home, and so naturally follow the latter policy. Device (d) would operate in the same direction, since it would make the bank notes a less desirable form of money to have in one's possession, in that they could not be employed for this particular purpose.

Problem 5

It must have been gold money which left the country, for other nations will not receive from us moneys which have only a conventional, legal, or local value. *Gold alone* has in itself a guarantee of its goodness.

Problem 6

The purpose of Congress was to keep the silver, in the form of certificates, out in the general circulation, in order to keep it away from New York City and the Federal Treasury. This device succeeded admirably, because there is an almost unlimited demand throughout the

country at large for small bills, and that demand easily absorbed all the available supply of silver certificates. In fact, the country has commonly been ready to take a still larger quantity, and there was until recently an almost continual clamor from the bankers for more small bills, whether Treasury notes or bank notes.

Page 424

Problem 1

The mint ratio used by France overrated gold, therefore made it the standard, sent silver to a premium, and consequently, under Corollary 5, drove it out of circulation.

Problem 2

We should expect a net movement of money *toward* Europe during the second quarter of the year, because at this time America is exporting a comparatively small amount of goods, while its imports are, if anything, larger than usual and its obligations on account of travel in Europe are increased, with the result that there is a balance of indebtedness against America in favor of Europe. On the other hand, there is naturally a net movement of money toward America near the end of the third and early in the fourth quarter, because at that time America's exports, which consist largely of agricultural products, have reached their largest amount, so that there is a balance of indebtedness against Europe and in favor of America, which condition continues so long that it becomes practically necessary to send gold this way.

Problem 3

The author feels sure about this because of the corollary of Principle 2. A nation can never be despoiled of its money stock by an exchange drain, because the diminution of said money stock itself sets in motion the forces necessary to bring about a stoppage of said drain.

Problem 4

(a) Answer: \$630.70.

(b) Answer: \$281.27.

(c) This shows one of the reasons why we do not need to be anxious lest we should lose our money stock. The condition under which alone gold movements are possible is one which is naturally self-destructive. In order that we should export gold at all, there must be a high rate of exchange—i. e., just as soon as the rate falls below \$4.89 and a fraction, any outward movement of gold must cease. But such a high rate of exchange tends to reduce itself; for it makes exporting particularly profitable, hence increases our exports, hence increases our

credits abroad, that is, makes the supply of exchange on Europe abundant, hence brings itself below \$4.89 and a fraction. But, in thus destroying itself, the high rate of exchange takes away the condition necessary to gold exports, and so brings about a stoppage of those exports.

Problem 5

This movement is primarily brought about by the demand of the West for money to move its crops. The bankers, feeling this demand, order their New York correspondents to send them their balances in order that these may be ready for local use. This outward movement is probably also influenced by the fact that during the latter part of the summer the East is buying much of the West and therefore has an exchange balance to meet. On the other hand, there is an inward movement toward New York during the late fall and early winter. The first reason for this is that the West no longer has uses for the money which it has drawn out early in the summer, and therefore sends it back to New York to swell its balances with its correspondents and to earn the one or two per cent interest which is commonly paid by New York banks on banker's balances. A second reason, probably, is found in the fact that, as the purchases made from the East for the fall and winter trade increase, the balance of trade begins to go against the West and so it has a balance of indebtedness to the East.

Pages 435-437

Problem 1

The gentleman was confusing the *price* of money with its real value. Of course, the price of money could not change as long as it was used as the measure of values, since the measuring of anything in terms of itself gives us the same answer at all times. But this *price* of money, that is, this measure of money in terms of itself, gives us no clue as to the real value of money. Obviously, we must look around for some other object to measure the value of money by. The practice of economists and of people generally is to try to measure changes in the value of money by goods in general, which means by noting changes in the level of prices. If prices in general have gone up, this is understood to mean that money has gone down. If prices in general have gone down, this is understood to mean that money has gone up. Of course, an argument could be made for the contention that some other measure of value was a more legitimate one than goods in general; but this is too deep a question for present consideration and was not involved in the remark made and quoted. As measured in the usual way, there

could be no doubt that money had risen in value, that is, that the level of prices had greatly fallen since 1873.

Problem 2

During the first period, we had irredeemable paper money, a money which had no power to circulate outside of this country and hence constituted, as it were, a little reservoir of money altogether by itself, shut off from other bodies of money. As a consequence, any deficiency in this quantity of money could not be relieved by drawing money from other countries, other reservoirs; and, on the other hand, any excess could not be relieved by a flowing out of money from this country or this reservoir into other countries or reservoirs. Hence, Corollary 1, Principle 1, worked more effectively between 1862 and 1879 than it would have between 1850 and 1860. (A great rainstorm falling on a body of water connected with the ocean cannot produce any appreciable effect upon its level. The same storm falling upon a small reservoir entirely shut off from other bodies of water would raise the level decidedly.)

Problem 3

(a) The free coinage of silver would not make an ounce of silver worth \$1.29 as measured in the present dollar; for free coinage means nothing more than that the mint will give for 412.5 grains of silver another 412.5 grains of silver turned into silver coins, and this is not at all like the case supposed of buying eggs at a fixed price, and so the argument from analogy has no application here. In fact, such an exchange as that described has no tendency to make the value of silver as measured in other things any higher than it was before. Of course, if the mints offered to purchase all the silver that came *with gold* at the rate of \$1.29 per ounce and carried out its promises, silver would at once go to that figure as measured in gold; but nothing of the sort was proposed, and of course nothing of the sort was at all feasible.

(b) The statement made by Mr. Bryan was true in this sense, that an ounce of silver would rise to a *nominal* value of \$1.29. But of course this value would be the value of silver as measured in silver itself.

Problem 4

The fallacy consists in assuming that, in order to be able to pay the debts which may be in existence at any one moment, we need at some one time a quantity of money equal to the total amount of those debts. This is like imagining that, in order to have a music hall so made that an audience can be gotten out of it, the doors must be wide enough to let the whole audience pass out abreast. Just as the audience, in leaving

the hall, will pass out of the doors in succession, so the debts of a community will be paid *in succession*. Hence, even if all settlements were made with literal money, a debt of almost any magnitude could be settled with a comparatively small amount of money.

Problem 5

(1) Yes, the Mexican dollar would have risen in value; for, when we say that silver is the standard, we mean that it determines the value of the dollar, that is, the dollar rises in value when the silver rises, and falls when the silver falls.

(2) No, the silver dollar would not have risen in price; for silver itself is the thing in which values are measured when we are talking about prices, and of course the measurement of anything in itself can never change.

(3) No. In making a certain amount of silver the determinant of the value of the unit, we thereby fix the price of silver bullion, and that price of course is unchanging until the law itself changes.

Problem 6

At the date named gold must have been the monetary standard of France. At the mint one ounce of gold was treated as if it were worth 15.5 ounces of silver, while on the market one ounce of gold was worth only 15.3 ounces. Accordingly, the mint overrated gold and therefore made gold the standard.

Problem 7

No. The facts stated did not establish his contention. The needs which are developed during a panic are no clue to the needs of the country in ordinary times. Of course, our supply of money was insufficient in the midst of the panic; and so it would have been, if we had had four or eight or ten times as much money as we did have. It is characteristic of a panic that the ordinary substitutes for money are useless and that everyone who has any claim for money is demanding the realization of that claim at once. But such a demand cannot be met by the money ordinarily in use however great its quantity. For, whatever the quantity, the general price level will so adjust itself that said quantity is substantially all kept busy in ordinary times; and so, when an extraordinary increase in the need takes place, there is no surplus to meet it. Here, again, we can well use the analogy of the public hall. The fact that the exits of a theater are not adequate to take care of an audience which has been stampeded by an alarm of fire is no proof that those exits are not adequate on ordinary occasions. A very little reflection will show that it would be quite impossible, even if

the walls of the room could be entirely taken out, to get a panic-stricken audience out without some persons being injured.

Problem 8

The fallacy consists in imagining that providing for the free coinage of silver at \$1.29 an ounce when on the market it was worth only 65 cents would double its *value*. Undoubtedly, such action would double the *price* of silver, that is, the value of silver as measured in money, for silver itself would then become the standard of value and would have whatever price the law gave it when that law fixed the amount of coin to be made out of one ounce. But this would bring no advantage to silver mine owners, since it would be *merely a nominal* advance in the price or value of silver, and so would be offset by the fact that the money received in exchange for the silver bullion would not go any further in buying other things than the smaller quantity of money which they formerly received for their silver went. Without much doubt, however, the silver mine owners would have made somewhat increased profits, because of free coinage, but for quite a different reason. Although the raising of the price of silver from 65 cents to \$1.29 per ounce would be merely a nominal advance in its value and not a real one, there would probably be some real advance, that is, some advance in silver as measured in gold, in those countries where silver was merely a commodity; for the increased use of silver would naturally cause its marginal significance and its marginal cost to increase, and the real value of silver as measured in other things would rise. This rise would, plainly, increase the profits of silver mine owners.

Problem 9

Since the mint treated silver as if 15.5 grains of it were necessary to purchase one grain of gold, while in reality it took only 15.3 grains of silver to purchase one grain of gold, it underrated the silver, or over-rated gold. That made gold the standard and sent silver to a premium. But money which is at a premium will not usually stay in circulation. Hence it was to be expected that silver five-franc pieces would disappear from circulation. People were therefore surprised when they saw someone offering these coins at a railway station to pay for a ticket.

Problem 10

A coin in active use is bound to be worn more or less. Further, more or less of the coinage is certain to be withdrawn from circulation to use in the arts and to send abroad in payment of foreign debts. But the gold which is withdrawn for either of these purposes is naturally

valued in proportion to its weight, and hence, for these purposes only full-weight coins are chosen. Consequently, whatever drain on the coinage arises from these causes will fall upon the full-weight coins rather than upon those that are short in weight, leaving the latter to continue in circulation. This tendency will be strengthened by the fact that those who have the short-weight pieces are likely to lose upon them if their defectiveness is observed, and this is likely to be the case if they are taken to banks where the least ground for doubt causes the coins to be weighed. Hence ordinary persons will usually be careful to pass on worn coins as promptly as possible. In a word, worn coins will have more than the average tendency to circulate constantly, while full-weight coins will from one cause and another have more than the average tendency to be withdrawn; and the result will be the progressive deterioration of the total coinage. If, however, the government redeems all worn coins at their face value, people will not hesitate to bring in even the inferior coins and have those recoined, since this procedure does not involve them in any loss, as it would if the government did not pursue this policy.

Problem 11

First, we do not even immediately pay for what we buy abroad by sending out money. On the contrary, payments for imports are commonly made either with drafts, or by accepting bills drawn by the seller of the goods. Secondly, this will not commonly mean the sending out of money even in the long run, since in the long run we will in our turn be selling goods to outsiders, and the credits thereby created in our favor will be used to offset the credit against us which has already been brought into existence.

Problem 12

(a) Most of the silver coins went out of circulation because, under the conditions named, gold became the standard, since it was the cheaper of the two metals; silver, consequently, went to a *premium*; and premium money, as we remember, tends to go out of circulation.

(b) Some of the silver coins, however, remained in circulation because they were so much worn that they were still worth more as money than as bullion, and hence it was not profitable to melt them.

Problem 13

In saying that our mint ratio between silver and gold was 15.98 to 1, it is meant that the mint puts into a certain number of dollars' worth of silver coin 15.98 times as much metal as it does into the same number of dollars' worth of gold coin. It does not mean, as we not infrequently

read, that the mint would exchange the metals at this ratio, that is, that the mint would give you, for a certain quantity of gold, 15.98 times as much silver, or vice versa. The mints made no such exchange.

Problem 14

Yes, this was normal. At this season of the year the moving of the crops is about over, and the need of the West and interior generally for extra supplies of money has largely disappeared. The money, therefore, is being sent back to the centers, particularly New York, to increase the balances of the country bankers with their New York correspondents; also to earn the 2 per cent which is commonly paid by the New York bankers for bankers' balances.

Problem 15

Yes, this was normal. At this season of the year Europe is buying very largely of America, and so the obligations of Europe to America are greatly in excess of the obligations of America to England. In consequence, gold very naturally flows this way.

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Problem 1

It would not be unreasonable to suppose that of this \$1,500 net return, 6 per cent of \$3,000, that is, \$180, should be thought of as interest upon the money which Mr. Crane has invested. Again, \$120 might be looked upon as true profits, that is, the return received by Mr. Crane for assuming the responsibility of this business. Finally, the remainder, that is, \$1,200, may be looked upon as wages earned by Mr. Crane in the capacity of manager, bookkeeper, salesman, and so on.

Problem 2

It probably would not be wildly unreasonable to suppose that \$35 of this total sum would have to be given to the government by way of taxes; \$15 might be assigned to wages of management; \$60 to repairs and replacement; \$80 to economic rent; and \$170 to what is, in the narrow sense, interest.

Problem 3

The different elements entering into this sum are: (1) interest on the investment in the plant; (2) repairs and replacement; (3) profits on the investment as a return for taking responsibility; and (4) the wages paid for the labor necessary to manage the business. Probably the latter constitutes the larger part of the \$1.50.

Problem 4

In working out a theory of production, we are trying to learn the processes through which, and the principles under which, the different factors are brought together to produce an output of product. In working out a theory of distribution, we are trying to learn the processes through which, and the principles under which, the output of product is allocated to the factors which were brought together to produce it.

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Problem 1

Conceivably the shares of the social income going to individuals might be determined by *direct assignment* through some public authority, in accord with some accepted formula of justice or expediency. Presumably this would be largely true under communism and somewhat less so under socialism. Under the present order, however, the immediate avenue through which a share in the social income is derived is the control of some factor of production, a condition which of course requires the consent and support of public authority; and the amount of the share thus derived is determined, not directly by authority, but by the value or price of the service of the factor controlled. But the values or prices of factors are determined under the same principles as those which determine values or prices in general. In turn, these principles constitute the most important part of that division of economics most commonly called Exchange. It follows that it is not unreasonable to treat the chapters devoted to the subject of distribution as really a part of Exchange; and, in order to differentiate these somewhat from the more general part of the subject, it is not unreasonable to label them Exchange-Distribution.

Problem 2

The solution of the problem of distribution which is characteristic of current economics makes the share of each owner of a factor dependent on the *functioning* of that particular factor; either (1) he gets what the functioning of his factor *adds to product* (the productivity theory), or (2) he gets what *expresses the effective or marginal importance of the function* of his factor (Taylor). But, immediately, either of these solves our problem *only* for the factors or their functions. It answers the question: How much will be credited to factors or functions? rather than the question: How much will be credited to persons? In order to cover the problem of personal distribution, the account of functional distribution needs to be supplemented, first, because the same person may have control of more than one kind of factor and so may receive more

than one type of income, and secondly, because persons may obtain a share of the social income from sources other than economic ones: fraud, corruption, theft, etc. We do not have a full account of distribution till we include the effect on the sharing of the social income due to these extraneous elements, elements not provided for in a study of functional distribution.

That this point does not need elaboration is perhaps sufficiently evident from its very nature. We all know something about the non-economic sources of personal shares, and know that society spends much effort trying to reduce their influence in determining the general result. Doubtless those officials whose duties include carrying out this social task need to make a careful study of the extent, the causes, and the best methods of correcting this evil. But there is little of interest to the general student which is not sufficiently obvious to everyone.

Problem 3

The doctrine of this text with respect to the price of any primary factor, and therefore with respect to the share of the product going to the owner of such factor, is that said price tends to approximate a price which expresses at once the marginal utility or importance of said factor and the marginal disutility of supplying it, in case there is such a disutility. In recognizing the influence of disutility, our doctrine justifies the contention—if not stated too absolutely—that “the natural laws regulating distribution assign to each owner of a factor of production that portion of the product which is economically necessary to evoke and maintain the efficient operation of his factor.” But, because it recognizes the influence of utility or importance as well as that of disutility, it also justifies the contention that “the natural laws of distribution assign to each owner of a factor of production that portion of the product which is economically necessary to” insure that the supply of his factor shall be most advantageously utilized.

Now, it is assumed in the problem that this account of the matter fairly represents orthodox doctrine; and I believe this is true. Further, if either half were to be omitted as of limited application and even unsound, I fancy it would be the one which recognizes the influence of disutility or pain-cost. That is, if I were trying to put into a single expression the gist of orthodox teaching and felt at liberty to omit either half of the doctrine brought out, I should choose the one which represents the system of distribution as being one which is necessary to insure *the most advantageous utilization of factors*. But, however this may be, it surely is true that, in affirming a doctrine which recognizes the joint influence

of both disutility or pain-cost and utility, we implicitly admit that it is quite possible that the natural laws regulating distribution should "assign to each owner of a factor of production" a portion of the product which is *in excess* of that "which is economically necessary to evoke and maintain the efficient operation of his factor"; we admit, in other words, that each owner of a factor *may* get a *surplus* over the least he would consent to take. This, of course, grows out of the fact that the first extra-marginal demand price *may* be higher than the marginal supply price—the lowest price which sellers will consent to take—in which case said first extra-marginal demand price, rather than the marginal supply price, will set the lower limit of price; and consequently the actual price of the factor, the share of the product going to its owner, will necessarily be greater than what would be required "to evoke and maintain the efficient operation of his factor."

Problem 4

We do not say that. Instead we say: "Each of us tends to get an income which expresses the marginal significance of his *type* of service." We might change the part after "expresses" to this: "the *effective* significance of his service," for his "effective" significance is the same as the "marginal significance of his *type* of service."

Pages 455

Problem 1

No. Since, by hypothesis, competition is free and general conditions normal, the rate of wages prevailing, that is, \$1.50 per day, would doubtless express approximately the contribution made by the marginal laborer. That is, for some purposes anyhow, the utmost which employers could pay for labor would be \$1.50. If, now, the law should raise the minimum to \$5, employers would be obliged to dismiss those laborers who did not produce \$5 worth, and so, many persons would be thrown out of employment.

Problem 2

The respect wherein this way of putting the matter is erroneous is in the fact that it makes *bargaining* the process by which fair wages are reached; whereas economists have usually taught that competition among employers is the process which would tend to insure fair wages.

Problem 3

Great Britain was anxious to secure great efficiency in the production of munitions. Exceptional profits in this field was the condition most likely to accomplish this end. Taxation of these profits might easily be placed so high as to kill the goose that laid the golden eggs.

Problem 1

(a) 20 times 4 cents, or 80 cents.

(b) 20 times 7 cents, or \$1.40.

Problem 2

Rent is a price (value) phenomenon; it comes to exist because the scantiness of the possible output of product over against the great demand for that product makes the value of that product higher than cost. If nature were as liberal with land-power or capacity as she is with air, there would be no rent.

Page 463

Problem 1

Rent is due, as so often noted, to the limited capacity of the land over against the demand for products—a shortage of land capacity. Such shortage could exist if the land were all of one grade, as was brought out under the first hypothesis.

Problem 2

The necessary shortage in land capacity would come sooner with a given population, if only a part of the total outfit of land were of high grade.

Page 469

Problem 1

In the fact that the price of such a house has to be higher than it would be if only its cost in materials and labor were taken into account.

Problem 2

In that said hire has to be a larger sum than it would be if only the cost in labor and materials of constructing, maintaining, and replacing the house were taken into account.

Problem 3

In that the price of said site is smaller than the sum of the series of rents which will be received from it in the future.

Problem 4

Same as Problem 2.

Page 475

Problem 1

Those who deny the productivity of capital mean that there is no product in addition to the product which should be imputed to nature and labor; for the capital itself is nothing more than a congelation, so to speak, of nature and labor. Thus, when our fisherman, instead of using the whole of his labor in directly catching fish, devotes a portion of it to

producing a net, and then uses the rest of his labor and the net in catching fish, these fish, though in a sense the immediate product of the net itself, are after all the product of the labor and nature back of the net; so that there seems to be really nothing here producing fish except nature and labor. Now, what the economist has to explain is the fact that, in spite of all this, the product is not credited wholly to nature and labor (or capital *as congealed labor*), but that a portion of it is credited to capital *as capital*. We think that this can be done and has been done; but it cannot be done by the very easy process contained in the sentence quoted.

Problem 2

(a) Answer: 43. Each day's catch on the new plan represents two days' labor, one making the net and one using it. If, therefore, capital as capital, in other words, the capitalistic method, is to have any credit, each day's catch on the new plan must exceed the old catch of two days, i.e., 42 fish, by at least one fish, that is, must be 43 fish or more.

(b) Answer: 4,740 fish. If he could catch with the aid of the net 200 fish each day, then in 30 days he would catch 30 times 200, or 6,000 fish. But, in the 60 days devoted to producing the net and fishing with the net, he could have caught 60 times 21 fish, or 1,260 fish. The superiority of the net method, then, will equal the difference between 6,000 and 1,260 fish, or 4,740—the maximum amount which could ever be credited to the capitalistic method as such, that is, to the net as capital.

(c) This amount, 4,740 fish, would all be credited to capital as capital, provided that (1) this number or more were demanded at a cost price equivalent to one twenty-first of one day's labor; (2) that there was but one net; and (3) that no more waiting power was available to permit the making of other nets. Under these conditions, fishermen would tend to bid against each other for the use of the net until they had turned over the whole surplus to the net-owner.

(d) If, in fact, only 1,000 fish were actually credited to the net, we could explain this by saying that the quantity of capital had been so much increased, it had been put to marginal uses so low, that the significance of the amount necessary for a net was no greater than that of 1,000 fish; and that therefore the net-owner was obliged to be satisfied with 1,000 fish out of the 4,740 which the use of the net had added to the catch. Economists who believe that the disutility of supplying capital influences the rate of interest would count that element also as an item in bringing about the result in question.

(e) If there were adequate motives for accumulating waiting power

to an amount in excess of all the needs therefor, the net-owner would get only such a proportion of the catch as was necessary to remunerate the labor required to make the net at the current rate of wages.

Problem 3

I think not. The real question is this: If capital had no disutility cost, could its amount be sufficiently limited to insure that it would have marginal utility or productivity—that there would still be opportunities to increase productive efficiency by a resort to more roundabout methods? I think such limitation is theoretically possible. The possible supply of capital is limited by the following facts: (1) The *total* income, which it could never exceed, is *limited*. (2) The share of income which could be devoted to the future is less than the total, since something *must be given to the present* if we are to continue to live. (3) Of possible gratifications which are otherwise equal, the present ones outweigh in our feelings those of the future—depriving the present for the sake of the future involves a sacrifice, a disutility. The third is the one which by hypothesis has disappeared. Would not the first and second prove sufficient to insure the requisite limitation on the supply of waiting power? I think so.

Page 487

Problem 1

Chinese immigration would tend to lower the standard of living in this country, and so tend ultimately to lower the rate of wages.

Problem 2

This is a direct deduction from the corollary. Since wages must, in the long run, embody the standard of living demanded by the class to which the laborer belongs, therefore, we can hope to raise wages, in the long run, only by raising this standard of living. But, again, this raising of the standard of living can be accomplished only through the ideals and habits of the people, hence the proposition.

Problem 3

The policy in question tends to raise the laboring man's estimate of what the minimum standard ought to be, so that, in so far as his estimate determines the rate of wages, that rate tends to be raised by the policy in question.

Page 502

Problem 1

The proper test of an alleged function of any particular agent in the productive process is this: Can any person other than the agent in question perform the function in question? If the answer is yes, the

alleged function is not the true, distinctive function of said agent; if the answer is no, then said function is anyhow *one* function of said agent.

As applied to the case in hand, if any person other than the entrepreneur can perform the function of management in whole or in part, then, so far as this is possible, management is not a function of the entrepreneur. But, as everyone knows, management can be, and commonly is, delegated in large measure to salaried laborers. Management *in general*, then, cannot be looked on as the function of the entrepreneur.

It seems plain, however, that some slight amount of managerial functioning has to be left to the entrepreneur, at least deciding what agents—officers and boards—shall exercise authority in determining the general policies of the business, and appointing the chief administrators. To a very limited extent, then, management is one of the functions of the entrepreneur. It follows, also, that to that extent profits may be described as wages of management.

The question still remains whether this is a complete account of the matter, whether there is any other function necessarily reserved for the entrepreneur—and so a necessity for some broader statement as to the nature of profits. The text has developed a much more distinctive function, and one which better suggests the business point of view, namely, *assuming the responsibilities of production, including the risk of losing one's capital*. Obviously, this function in its fulness cannot be delegated to any person other than the owner of the business, individual or corporate. It therefore must be included as a distinctive function of the entrepreneur. It follows also that profits must, anyhow, include *something more* than wages of management, namely, *payment for assuming the responsibilities of production*.

As applied to the corporate entrepreneur, the "wages of management" idea is particularly inappropriate, since such an entrepreneur simply is *obliged* to delegate managerial function to his agents; that is, it is not possible for him, as entrepreneur, to perform the managerial function in any full sense.

Problem 2

First, there is no such fund. Secondly, in large measure, the losses are not covered at all: many entrepreneurs fail altogether of recouping themselves. Doubtless this element of insurance is to a limited extent present in the case of the successful entrepreneur, in that he sets his minimum at an *average* return on the capital, looking on the small returns or even losses of a lean year as something to be offset by the exceptional gains of a fat year. But, in the main, he has to be paid more than the

mere lender of an equal amount of capital, because only so can he be adequately rewarded for his additional sacrifices of risk-taking, responsibility-bearing, etc.

Page 537

The man who gets profit has to undergo the *risk* sacrifice; the interest receiver escapes this. The sacrifice of the former is thus greater and, besides, of a kind which, in most people's minds, is more deserving of remuneration.

Page 538.

The sense of a public interest, the respect for law and order, the willingness to forego the indulgence of violent passions were greatly lacking; society was all the time near anarchy; to maintain government was extremely difficult. To enlist the support of the strong men of the community by the means indicated was almost indispensable.

Page 543

This calls for little more than a resumé of considerations bearing on the matter in question, which considerations are presented in various parts of the text, including Chapter XLVII. (See pages 101-104; 114-121; 537-540; 554-557.)

Page 548

This may be true, because the efficient functioning of the executive may be conditioned on his having the outing in question, and his functioning efficiently may be more important from the social standpoint than the laborer's protection from the weather's cold. (See Note 10, Appendix.)

Page 553

The former reason is a worthless one in that it is based on the viewpoint of *generic* rather than *effective* importance. (See discussion in the text, pages 3-4.)

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